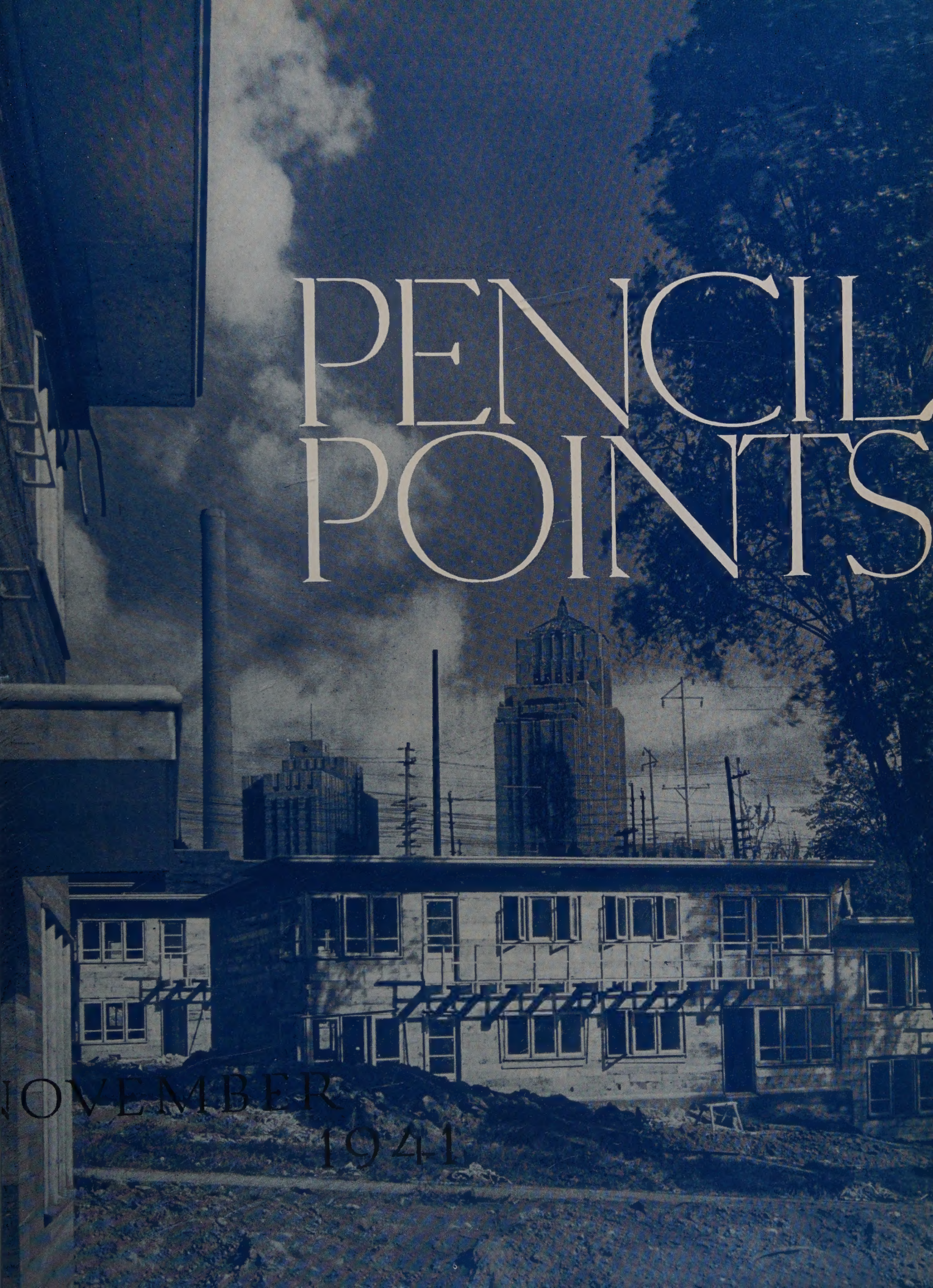
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1941

TYPIFYING the manner in which standing seam sheet copper roofing may be used over entrances to impart both warmth and color . . . and to accentuate the structure's individuality.

ANACONDA
from mine to consumer

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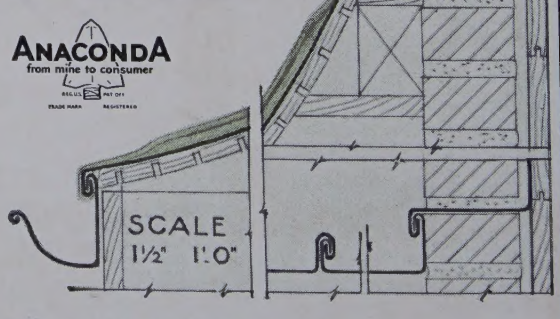

THE AMERICAN BRASS COMPANY, General Offices: Waterbury, Connecticut
Subsidiary of Anaconda Copper Mining Company • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

4167

PENCIL POINTS, published monthly by Reinhold Publishing Corporation at East Stroudsburg, Pa. Publication office, East Stroudsburg, Pa. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 50 cents. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXII, No. 11, Dated November, 1941.

How to take proper care of Store Front Metals

ARCHITECTS AND BUILDERS are often asked about the cleaning and protection of metal finishes, the restoration of neglected finishes, the use of lacquers, and of various metal cleaning products.

To serve as a guide in such cases, ZOURI has prepared a booklet entitled "THE CARE OF ARCHITECTURAL METALS," based on many years of practical experience in the field. It tells what to do, and what to avoid, how to preserve the original beauty of the various rustless metals—aluminum, bronze, and stainless steel.

You can be of tremendous service to the merchants whose store fronts you create, by stressing the importance of the proper care of metal. Write for your copy of this useful booklet today. ZOURI STORE FRONTS, NILES, MICHIGAN.

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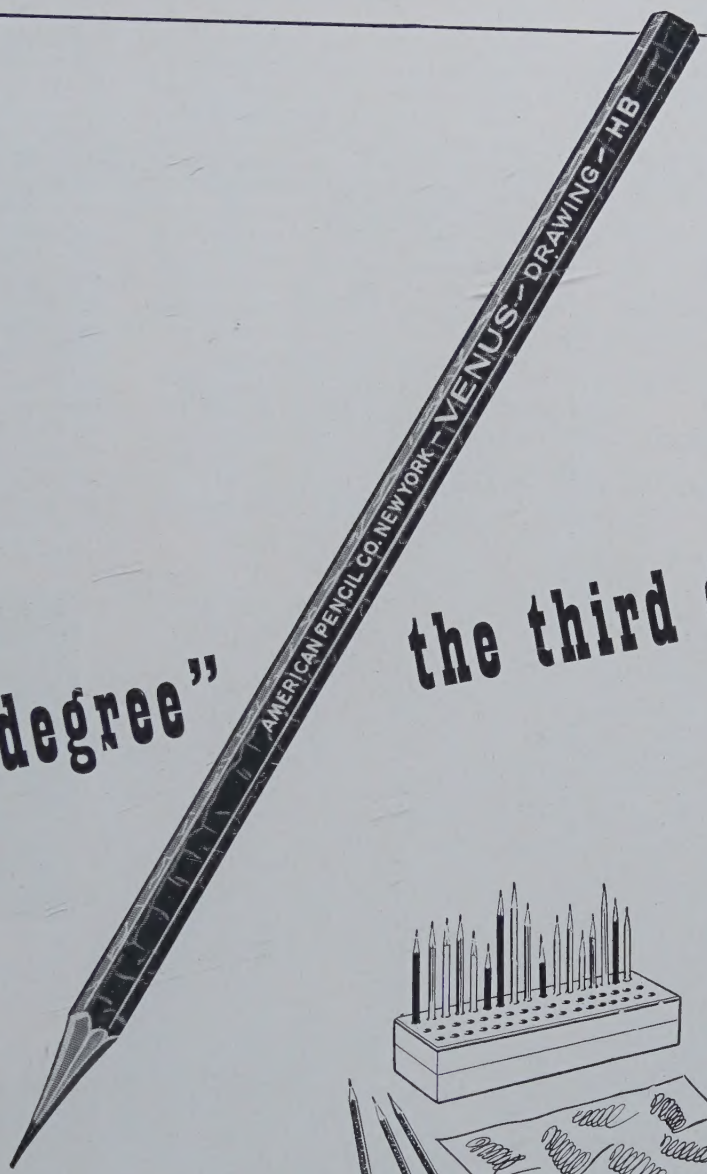
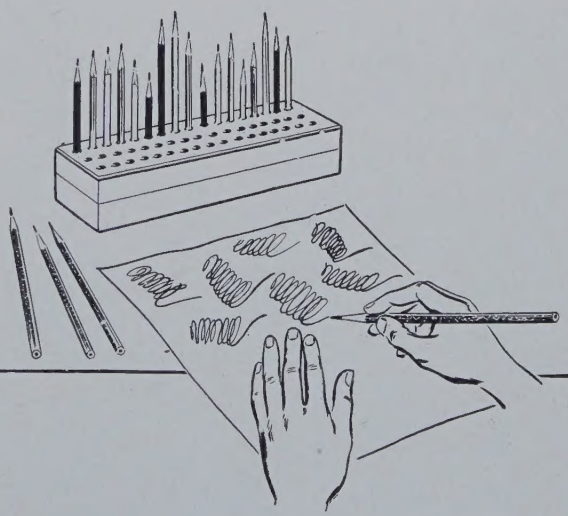
Giving "degree" the third degree





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ARCHITECTS everywhere are finding the Gold Bond 2″ Solid Partition System is the best way to increase floor area and reduce partition costs. Tried and proven in Hartford's Bellevue Square Court—and in scores of other housing projects, apartments, and office buildings—the Gold Bond 2″ Solid Partition System increases usable space 7%, provides a fireproof barrier that reduces room-to-room noise, and speeds up construction. The exclusive metal base is easily cut and bent on the job—no prefabrication is necessary—yet this better system costs no more than 5⅜″ wood stud and wood lath construction.

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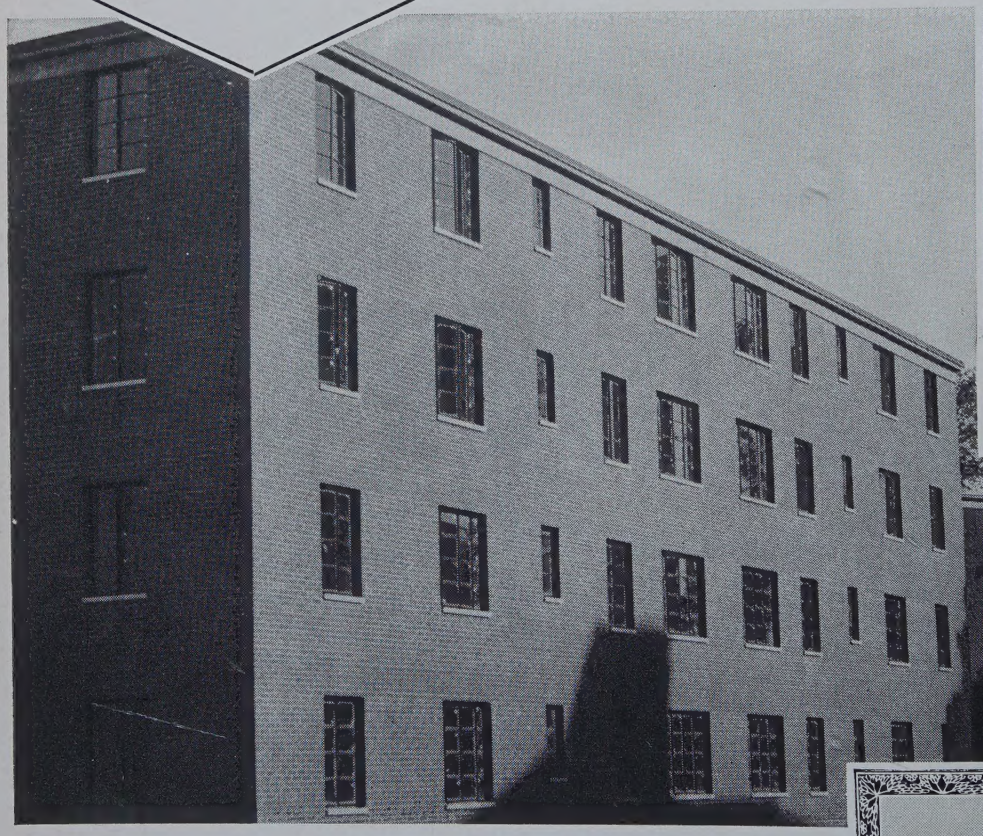
FREE DON GRAF SPECIFICATIONS, with complete architectural drawings of the Gold Bond 2″ Solid Partition System, now in preparation. Write for yours today. Metal Products Division, National Gypsum Company, Buffalo, New York.



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WHY DR. ERVING WEARS EAR MUFFS . . .

DR. ERVING'S ears are not cold. He just can't bear the constant din in his hospital. Footsteps echo and re-echo in the corridors. There is a steady hubbub in the reception rooms . . . in the wards . . . even in private rooms. Not only Dr. Erving minds this noise—the patients are annoyed by it, too, and their recovery is retarded.

What the hospital architect ought to do is install ceilings of Armstrong's Cushiontone. This new and improved fibrous acoustical material, in tile form, contains 484 perforations to each 12″ x 12″ unit which actually trap noise . . . make any room more quiet. Cushiontone does not absorb dust and dirt—just noise. It is easily cleaned with a vacuum cleaner or a wallpaper cleaner. It can even be repainted (when necessary) without affecting its noise-absorbing efficiency in any degree. Three thicknesses and two convenient unit sizes of Cushiontone are available.

The attractive ivory coloring is an excellent reflector of light—helping to keep illumination costs at a minimum. Cushiontone is also an efficient insulating material—keeping rooms at a more even temperature, summer and winter. Would you like more information? Write for your copy of "Tune out Noise," an informative illustrated booklet describing Armstrong's Acoustical Ceilings in detail. Address Armstrong Cork Co., Building Materials Division, 1227 State Street, Lancaster, Pa.

Armstrong's

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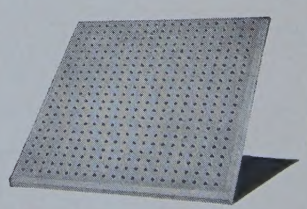

READY TO GO THROUGH FIRE AND WATER!

NO—the young man's not looking for trouble. But he'll take it when it comes as an opportunity to prove superior worth. Superior Barrett Roofs, too, take adverse conditions in their stride—conditions that spell b-r-e-a-k-d-o-w-n and e-x-p-e-n-s-e for inferior roofs.

The gravel or slag wearing surface of a Barrett Specification Roof not only protects the roof against mechanical damage and the sun's harmful actinic rays. It also is proof against flying sparks and embers. One reason why Barrett Specification Roofs take Fire Underwriters' Class A Rating.

Barrett Roofs have the problem of water damage licked, too. The coal-tar pitch in these roofs is actually preserved by water.

Barrett Specification Roofs, applied only by Barrett Approved Roofers in strict adherence to time-tested Barrett specifications, are bonded for periods up to 20 years. And Barrett Roofs regularly outlast the period of their bonds by decades! If you want superior roof performance, specify a Barrett Specification Roof.

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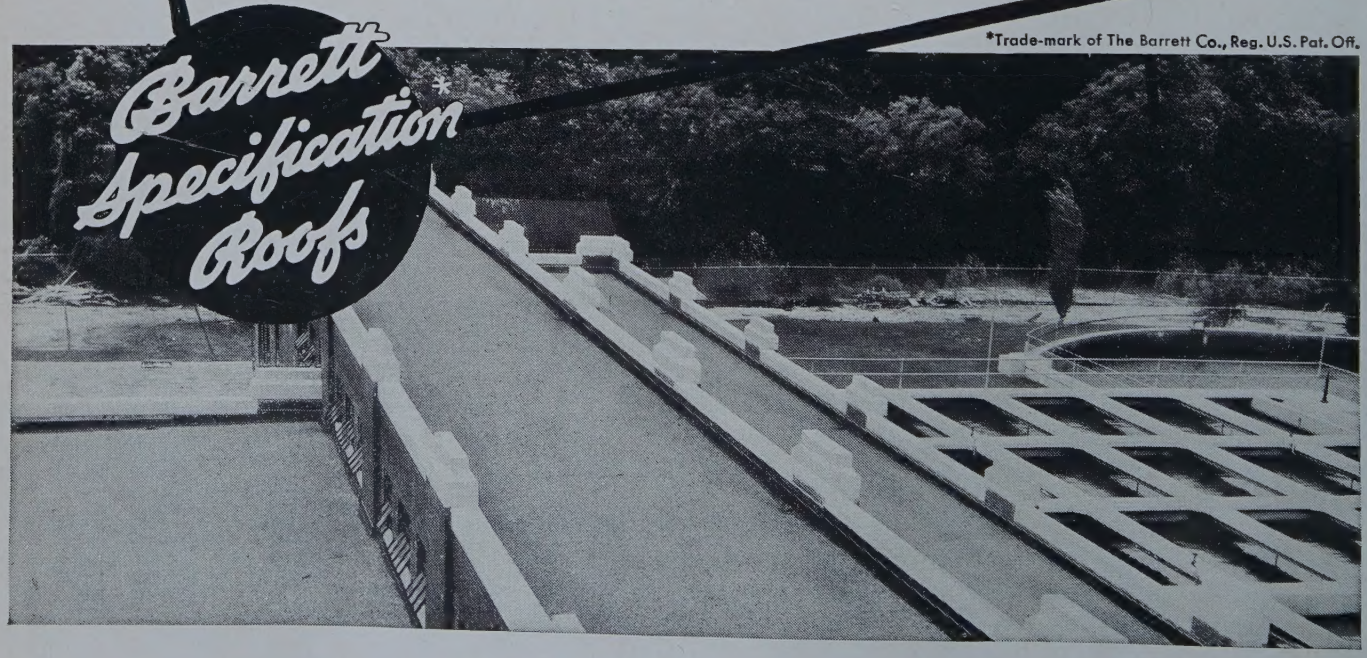

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Showing how Westinghouse diversified products and services meet the electrical needs of a wide variety of building projects.

★ An examination of Westinghouse applications in the "Electricana" below may suggest ways in which we can serve you in your building projects. You'll find 100 pages of specification details in Sweet's Catalog—and for quick, accurate answers to specific problems, just call "Architects' Clearing House" at your nearest Westinghouse office.

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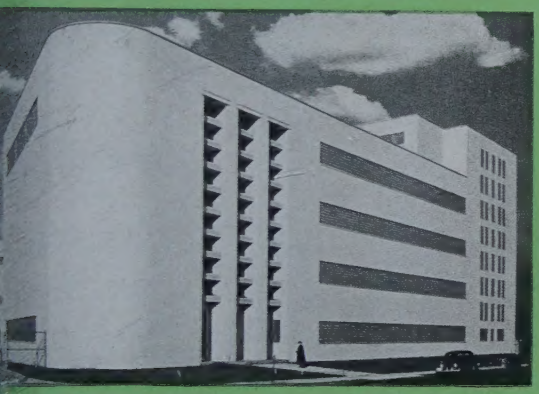
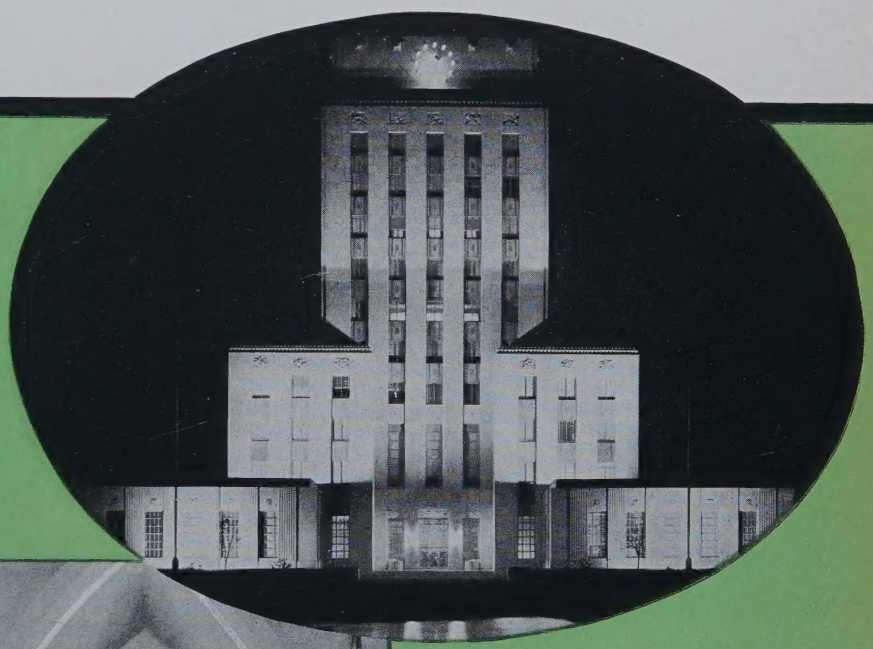
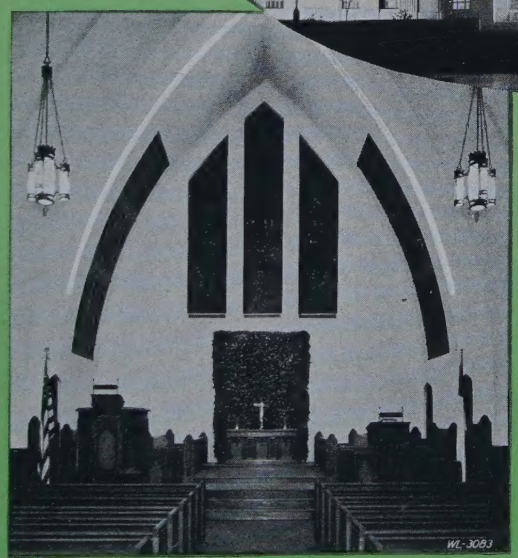


PANELBOARDS for main and feeder circuits, and metering, were furnished by Westinghouse for this modern industrial building. For efficient utilization of industrial power, you can depend upon Westinghouse for the most modern equipment.



FLOODLIGHTING of this municipal building enables its beauty to be appreciated by night. Westinghouse equipment also is used widely for protection and outdoor production for industrial plants and construction projects.



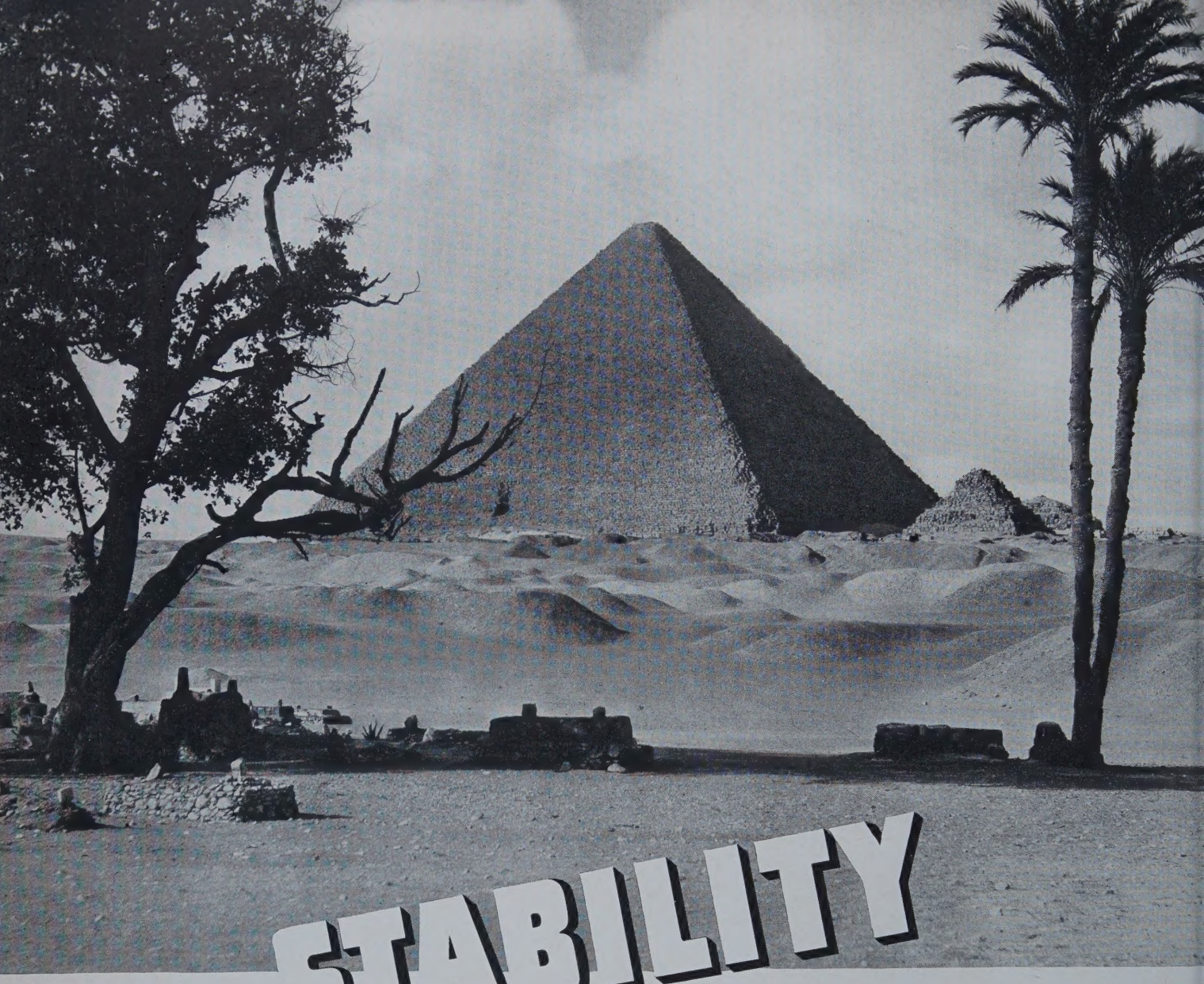
MAZDA FLUORESCENT LIGHTING, combined with incandescent lamps (both by Westinghouse) provides effective and striking church illumination. Fluorescent lamps are mounted end-to-end in a white trough, to give continuous reflected light.

IANT HEAT, derived from well water gh a Westinghouse refrigeration com- or, warms this home in mildly cool ier. By reversing the cycle, summer nditioning can be obtained from the installation.

ELECTRICAL KITCHENS and circuit protection equipment are by Westinghouse in many Federal Housing projects. These modern services offer economies in first cost and operating expense in any residential building.

Westinghouse

WESTINGHOUSE W



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● The word "Stability" is peculiarly applicable to Raymond, for it describes this organization both as to quality of performance and steadfastness of purpose. Of a structure, as of an organization, the prime requisite is firm establishment, that there may be no doubt of reliability. • More than 9500 contracts, completed during 44 years of world-wide experience, are evidence of the stability of Raymond performance. Hundreds of satisfied clients can testify to the stability of Raymond purpose – the acceptance of responsibility for the prompt, economical, satisfactory completion of any type or size of foundation project. • Your inquiries will receive the immediate attention of a near-by Raymond executive.

THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of pile foundation – concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.

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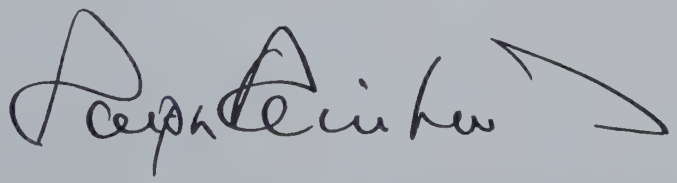
THANK YOU FOR YOUR COOPERATION

Architects are probably "questionnaired" more than any other professional group. It must get to be a nuisance! Consequently, we have been gratified by the response to the "Cooperative Editorial Quiz" that we mailed to our architect subscribers a few weeks ago.

No names were requested. And as a result, although many signed the questionnaire, it is not possible to express our appreciation individually. But we want to thank sincerely all of you who took time and thought to assist our Editors.

The results, we are glad to report, generally confirm our editorial policy of publishing a magazine solely for the architectural profession — a policy which has gained for us the largest architectural professional circulation in the history of architectural publishing. But most encouraging is the overtone of sincere interest and genuine affection that has characterized the letters of praise, of admonition, and advice written on hundreds of the returned questionnaires.

Many valuable suggestions, many thoughtful criticisms were received. Certain departments are more valuable than others; there will probably be some changes in at least two of the regular departments as a result of your suggestions. We always welcome any thought you may have which will enable us to make PENCIL POINTS ever better, ever more useful to you.



Publisher

THE THRESHING FLOOR

So many of our friends have been curious about the answers and suggestions we may have received through our recent "Cooperative Editorial Quiz" that it seems appropriate to print here comments selected from the first thousand answers. We regret that limited space does not permit us to reproduce in full many of the courteous, helpful replies. But we ask our readers to regard the following excerpts as representative:

"Keep it an architectural magazine. Stress design excellence and present technical data for the general improvement of architectural knowledge."

"To meet the competition of engineering and construction firms, architects must soft-pedal art. I stress their practical thinking. In practice an architect must be extremely practical to succeed."

"I much preferred the old PENCIL POINTS. It was devoted more to drafting technique. It was a magazine in a class by itself."

"Go ahead and run your paper the way you always have and quit dithering about what your subscribers think they want."

"I would subscribe to PENCIL POINTS if it had nothing but The Monograph Series. As it is, I prefer PENCIL POINTS to all other magazines."

"The biggest criticism I have to make of PENCIL POINTS is that it is like other architectural magazines, too prone to feature Eastern work and practically no representation of work done in the Middle West."

"Being interested in historical architecture, mainly Early American architecture from all parts of the United States, I should like a continuation of The Monograph Series of Early American architecture. I enjoyed them considerably."

"I no longer have any use for colonial houses and colonial details. . . . I now throw away 85% of PENCIL POINTS. What is Gropious doing at Harvard? van der Rohe at Armour? Moholy-Nagy at the School of Design? F. L. Wright at Taliesin? Antonin Raymond at New Hope?"

"As the small office is still the backbone of the profession it might be well to dig into this field. The level of American architecture is based not on the achievements of the top 10% but on the rank and file. How is the individual practitioner making out?"

"The fact must be recognized that the magazine will be distributed to professional men, many of whom are fully capable of producing work either as good or better than presented on your pages. For this reason, all of the work presented on your pages must be of the highest quality. Don't waste our time wading through mediocre work."

"I find that PENCIL POINTS still makes its appeal to the draftsman. Why help the draftsman to think as a draftsman in preference to making architects of our draftsmen? This is crudely expressed but I think you get my point. The smug little gossip of offices and pencil-pushers is a lot of damn nonsense."

"Can't you drop this foreign factory type of places? They cannot be called houses, much less homes. I predict that in a few years hence, when folks who have those abominations try to sell them, they'll find it better to put four sticks of dynamite at strategic points and blow them to Kingdom Come."

"I have a strong feeling that it would be well for each of the architural magazines to keep to a definite policy which would not overlap that of the others. To my mind the chief field for PENCIL POINTS is in the æsthetic side of architecture —rather than building construction, business, or engineering."

"Thanks for this opportunity to express an opinion. Might I suggest the elimination of many articles consisting mainly of hot air, and publishing more technical articles, color plates, portfolios, details, etc. . . . If there is one suggestion I could make about the whole architectural profession, it would be to get down to earth and eliminate so much blah, blah."

"Short-cut discussions of strength of materials and design, together with reference tables may be beneficial and interesting at times."

"The inclusion in your magazine of reports of the activities of starry-eyed economic planners, in my opinion, lowers the tone of a scientific professional magazine, since in years to come the world will laugh at such childish efforts to alleviate distress by elevating ignorance of natural law and permitting it to parade as science."

"It is difficult to express my attachment to PENCIL POINTS. But it seems to represent architecture as we like to feel it is (or perhaps wish it could be) . . . I am sure that this questionaire will reveal a host of readers as loyal as I."

"Don't fail to continue The Monograph Series. Suggest going South and picking up a few things in Virginia, Charleston, and New Orleans, etc."

"The best to be obtained for the money at twice the price."

"The subject of old colonial architecture has been pretty well covered—would strongly suggest its discontinuance."

"My only suggestion is that you try to avoid, as much as possible to do so, ending an article or series on the right hand page, and starting a new series on the left."

"More useful advertising like the U.S.G. Co. with specs. I believe the most useful subject you could include for every man in the profession is an outline of good specification procedure — streamlined, and a system of application with least amount of effort."

"I have always enjoyed PENCIL POINTS as a magazine although I believe in recent years you have taken it away from the draftsman and given it to the architect. Do not drop Don Graf. He is tops!"

"My interest in PENCIL POINTS has been due to its analyzation and presentation of design in all its phases as an inspiration and in cases as a guide."

"Consider it extremely valuable in recalling the happier phases of architecture as such—'Commoditie, firmnesse and delighte.' "

(Continued on page 12)

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Her convenience, comfort and happiness are in your hands--the woman of tomorrow who will live in the house you are constructing today!

Now it is multiple telephone outlets; a generation ago it was multiple electrical outlets. And tomorrow the home without the former may be as out-moded as is the house without the latter today.

When the house is being built is the time to install those few short lengths of Buckeye Steel Conduit that it takes to provide for the step-saving convenience of telephone outlets in the hall, dining room, bedrooms, kitchen and den.

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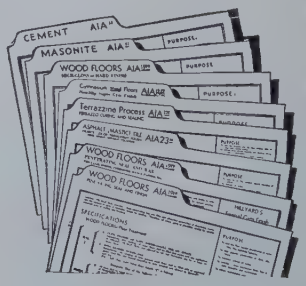
HILLYARD

Specification Cards



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(Continued from page 10)

"I have been a reader of PENCIL POINTS for years—and subscribed whenever I can afford it—I think it is the best magazine for the young architect especially one who has not gone overboard or haywire for modern. 'Keep on the beam.' "

"Most of our time is spent making drawings and anything that will help us better our own work is valuable. Other architectural magazines seem to have dropped this."

"As all of us file our magazines, why not have articles set up so that there can be no conflict on the opposite sides of the same pages. All architectural magazines make this mistake, and it would be tough to have to take two subscriptions to each in order to have complete articles and photographs."

"I would like to have a rendering by an outstanding renderer shown on the cover each month rendered by some of the following: A. Thornton Bishop; Otto Eggers; Schell Lewis; Ted Kautzky; Ernest Born; Chester Price; Floyd Yewell, and A. L. Guptill."

"I think its clear, open pages give a layman a very good impression of us."

"I like articles describing model trends in design, and the coming trends."

"Seems to me a pertinent subject would be the use of substitutes for materials now unavailable."

"As one person in practice I appreciate that you do not feel the necessity of 'pushing' Modern."

"Suggest helpful information for specification writers, for estimators, inspectors, and supervisors."

"I would subscribe to PENCIL POINTS if it had nothing but The Monograph Series. As it is I prefer PENCIL POINTS to all other magazines. I like details, pictures of good work, drawings and I hardly ever read text."

"PENCIL POINTS is the only architectural magazine to which I subscribe. I find it more acceptable than the others because it has adapted itself to changing times without stooping to some of the modern fads such as printing photographs with no title in plain view to tell you what it is."

(Continued on page 14)

COMBINING

FLUORESCENT LIGHTING... CORRECT SOUND-CONTROL... LOW COST...

COMPLETELY MODERN is this office of A. C. Neilson & Co., Chicago, Ill. To assure quieter, more efficient offices and provide more uniform, glareless light, J-M Sanacoustic in combination with fluorescent lighting was specified. *Architect:* Walton & Kegley, Evanston, Ill.

New Johns-Manville Ceiling Specification—J-M Sanacoustic combined with fluorescent lighting—permits architects to plan attractive, more efficient interiors even on limited budgets

NOW it is possible to give clients all the benefits of proper acoustics and fluorescent lighting at unusually low cost. For, with one J-M specification you can provide *both* at only slightly more than the usual cost of fluorescent lighting alone.

This new-type ceiling, consisting of J-M Sanacoustic Units in combination with fluorescent lighting, improves appearance, raises efficiency. The J-M Sanacoustic soaks up unwanted noise—assures a quieter, pleasanter, more efficient office. Fluorescent lighting provides uniform light, minimizes shadows and glare, reduces eye strain. And these two modern treatments, combined by the use of recessed lighting troffers, form a smooth, flat ceiling that is attractive as well as functional.

Like all J-M Acoustical Materials, Sanacoustic *maintains* its noise-quieting efficiency. Little upkeep is ever required. And when necessary, all materials can be salvaged and re-used. For details, write Johns-Manville, 22 E. 40th St., New York, N. Y.

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INVISIBLE
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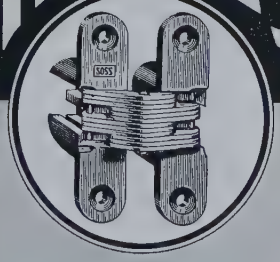

YOUR CLIENT WILL
APPRECIATE THIS FEATURE

No longer need surfaces be marred by those unsightly, disconcerting gaps and projections whenever a hinge is necessary. SOSS Invisible Hinges are out of sight when the door is closed. Their absence beautifies doors, cupboards, folding partitions, etc., and widens the opportunity for modern, unusual design. Write for full details.

SOSS MANUFACTURING CO.
21773 HOOVER ROAD
DETROIT • MICHIGAN

(Continued from page 12)

"Since I am a young architect I would welcome the inclusion of works by younger men in practice to show the trends in comparison with the works of the older established offices."

"More photographs of good modern architecture and detail and less space to the New England series—which though nice is not necessary after the first viewing and rarely used for any inspiration."

"I particularly like your Selected Details with photos and detail drawings of residential features. I like your policy of not featuring stupendous projects which have little value to the average struggling architect."

"The size of this questionnaire with relationship to the envelope presents an ideal Disregard of the Obvious."

"Why do you (and practically everyone else) send enclosures that have to be refolded usually in an awkward manner before they can be put in the accompanying envelope."

"Hamlin's language pains me—let's have a man who can write in everyday English . . . another thing—Why did you make this yellow sheet so damn hard to fold in the envelope."

"Give a complete story on anything that is published; all the Whys and Wherefores."

"The one section of your magazine which you have not asked comment upon; the most important, to me, and the one which really holds me in remitting year after year. That section is your Monograph Series. Would like to see more prints . . . less text."

"Congratulations are due PENCIL POINTS for reaching an all-time high in circulation, but first for the great improvement that has taken place in the past few years. Of all the architectural publications that come to the office PENCIL POINTS is the only one that is read in the favorite chair at home."

"Doggone it, you can think up more questions than an inquisitive six-year-old granddaughter, but I can answer yours easier than the puzzlers she profounds. Just keep PENCIL POINTS as it is."

"I should like to see more photographs and plans and perhaps less text."

"Please Mr. Hamlin, don't go soft. Every building can't be good."

"I would like more comments, data, or what have you on the various methods of operating architect's offices including standard forms found successful in various architect's offices for their practice . . . so that young architects like myself may take advantage of any advice that could be given."

"I like the philosophical approach to architectural problems and believe that Professor Hamlin's articles are particularly inspiring and helpful. I like to see examples of good architecture and good design regardless of type of building concerned. I am inclined to give the word 'good' a very wide interpretation leaving considerable latitude for the preference of the architect and the editor."

"I dropped my subscription to your old fashioned magazine some months ago, because I was tired of wading through the same old warmed dishes you present. Your 'increased circulation' I would say is due to a rise in income . . . rather than improvement in your magazine."

"I approve of the general conduct of PENCIL POINTS and choice of material presented, both in illustrations and in text, so that I am not expressing for or against individual features. There are certain departments, such as that of public work, in which I cannot enter and therefore discussion of these is not in my line; but who am I to say that this matter should not be presented in your magazine."

"Please keep PENCIL POINTS out of the real estate builder or 'see your name in print' class. Continue The Monograph Series. Continue the Don Graf kind of stuff."

"I think you know what kind of a publication you should print. You are doing O.K. Don't sell it down the river like the rest of them did."

"I take three architectural magazines: PENCIL POINTS is tops, absolutely tops. Make it cold and colder still to contractors, triple commission realtors and the ignorant banker (ignorant of the fine arts) . . . more power to PENCIL POINTS."

Keep heating costs low in defense housing *with*

FITZGIBBONS

units for all conditions— all fuels - all needs

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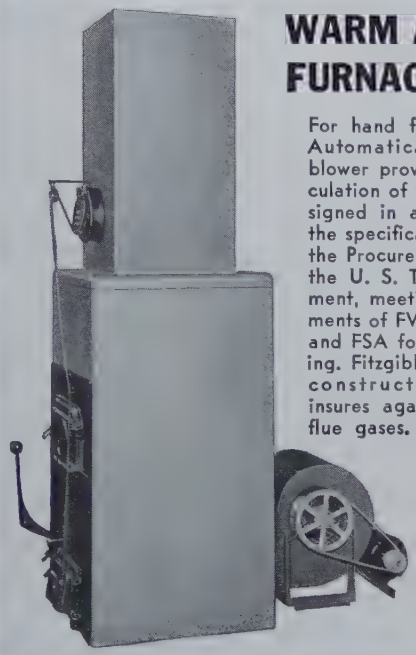

For hand firing with coal. Automatically controlled blower provides forced circulation of warmed air. Designed in accordance with the specifications set up by the Procurement Division of the U. S. Treasury Department, meeting the requirements of FWA, USHA, PBA and FSA for Defense Housing. Fitzgibbons "Weldseal" construction positively insures against leakage of flue gases.

FITZGIBBONS 400 Series STEEL BOILER

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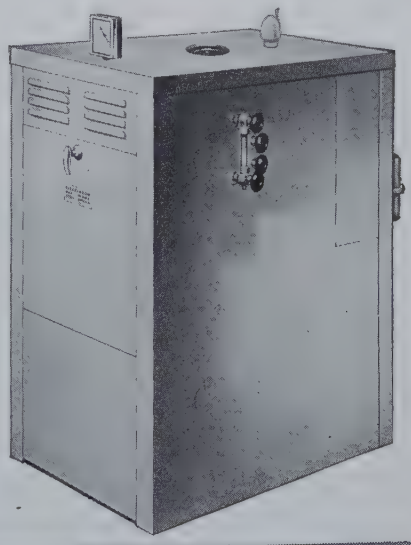

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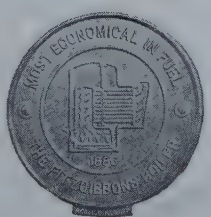
A distinctly small home air conditioner which has every Fitzgibbons advantage of welded steel construction, and extremely low fuel consumption. Warms, humidifies, filters and circulates the air. Quiet in operation, beautiful in appearance.

Warm air furnace, boiler, air conditioner — if it's a Fitzgibbons it is **quickly and easily installed, priced to fit its market, exceptionally low in fuel consumption.** Get the facts — mail the coupon.



PP-11

Fitzgibbons Boiler Company, Inc.

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Send me details on Fitzgibbons defense housing heating unit.

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HOW TO GET MORE "INTEREST" *from a building dollar*

...with Stucco

made with portland cement

THE SIMPLE DIGNITY of the design of the Riverside Bank in Miami, the clean, trim lines of the stucco exterior, draw the admiring interest of its customers. The lasting beauty of portland cement stucco, and the protection it affords, return interest in permanence and low upkeep.

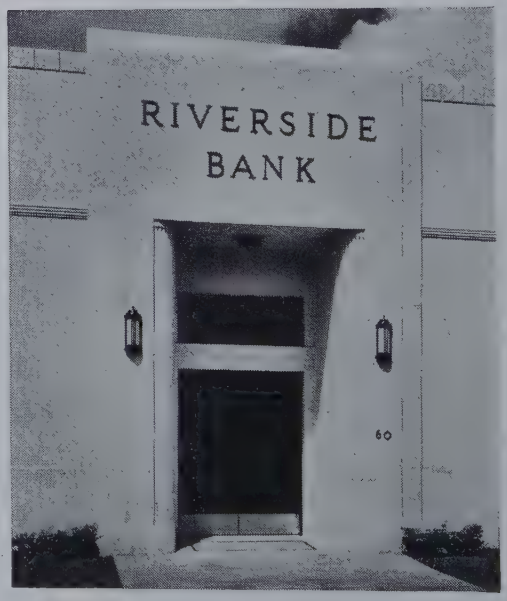
Stucco made with Atlas White portland cement is low in application cost and is economical over the years because it practically eliminates maintenance expense. It is fire-resistant and weather-resistant. It makes interiors cooler in summer—warmer in winter.

You can use portland cement stucco made with Atlas White cement with wood, brick or stone . . . in connection with different types of architecture...in a range of colors from pure white through pastel shades to gay yellows, warm browns, cool greens.

So whether you're modernizing old buildings or planning a new one, specify portland cement stucco made with Atlas White cement. See SWEET'S BUILDING FILE, Section 9/26, for complete specifications, or write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

• • •

Offices at: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.



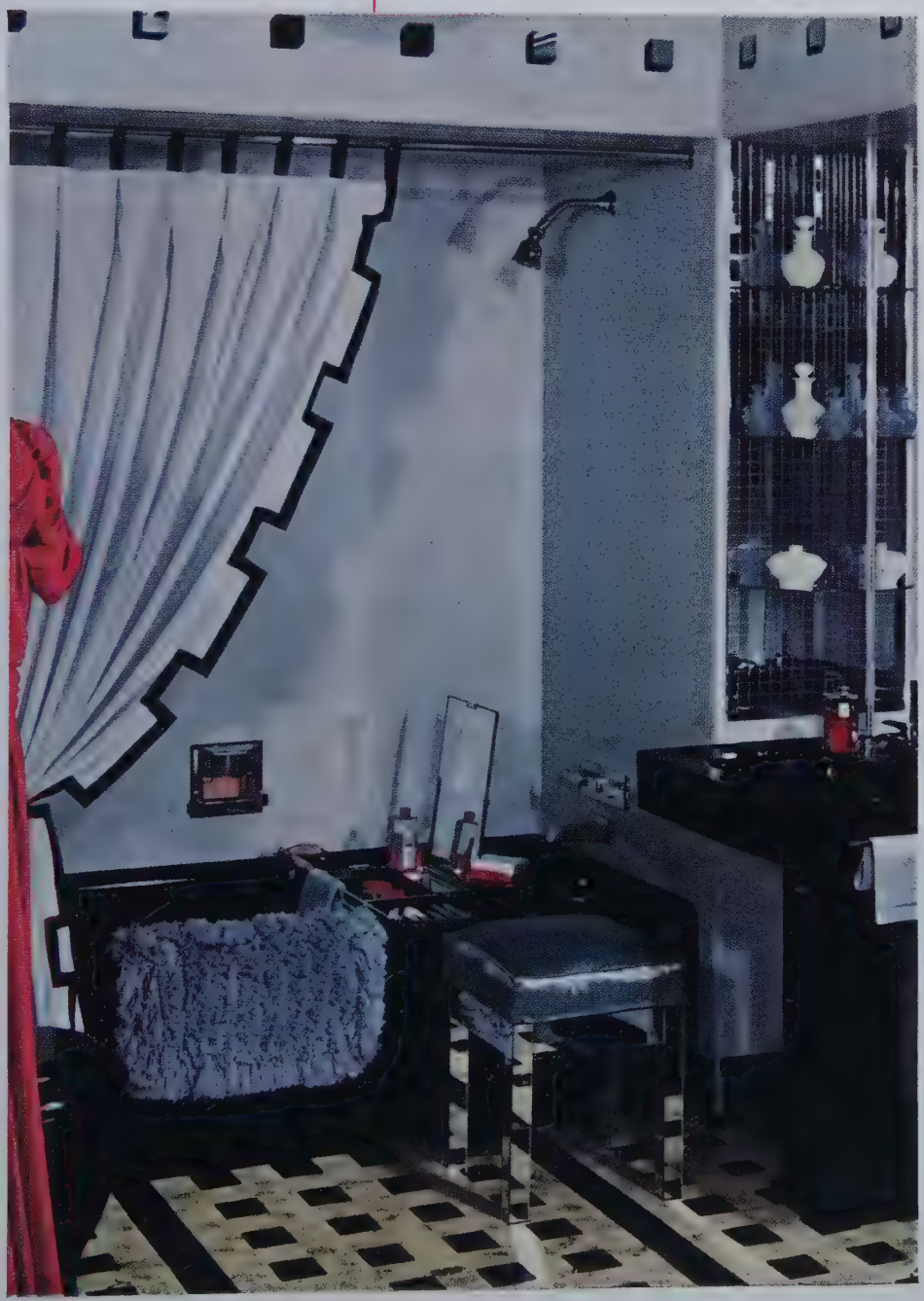
▶ *Here's a good example of how Stucco can be used to provide a substantial and dignified appearance. What's more, the stucco exterior of the Riverside Bank in Miami, Florida, will keep its good appearance for years with practically no maintenance. Architect, V. H. Nellenbogen; General Contractor, J. Y. Gooch Co.; Stucco Contractor, U. S. Plastering Co.—all of Miami.*

PP-S-27

ATLAS WHITE CEMENT

A UNIVERSAL ATLAS PRODUCT

New approach to an old wall problem... USE MODERN ARMSTRONG'S LINOWALL



WANT to put some real news value into your houses? Want bathrooms and kitchens with the "plus features" of permanent walls, at only about half their usual cost? Then you'll be interested in Armstrong's Linowall!

Housewives like this linoleum-like wall covering because it is beautiful and because inside and outside corners can be streamlined for easier cleaning. Simple soap-and-water washing removes smudges and ordinary stains.

Linowall is ideal for any wall area. With waterproofed seams, it can be used with complete safety around built-in tubs with showers. Linowall is an extremely durable material, too. It resists denting and cracking. With ordinary care, it never needs expensive refinishing, because the rich colors do not wear off.

Linowall is a truly modern material—modern in its decorative scope—modern in its practical advantages. It is made in 31 attractive colorings—plains in dark and pastel shades, wood grainings, burled and marbleized effects—to harmonize with any interior scheme. And for added notes of smart styling, Linowall can be inexpensively inset with original designs in linoleum, or appliquéd with wood, glass, or metal.

You'll like Linowall because, with it, you can put more value in houses without adding to their total cost. For complete facts and specifications, see *Sweet's*. Or write now for free, file-sized *Decorative Walls of Enduring Beauty*. Armstrong Cork Company, Floor Division, 1232 State Street, Lancaster, Pa.

THERE'S NEWS VALUE *in this beautiful bathroom. Distinctive walls of Armstrong's No. 771 Light Azure Linowall, appliquéd on the soffit with decorative chromium blocks, are bound to cause pleased comments. Floor is Armstrong's No. 0475 Straight Line Inlaid Linoleum with strips of No. 021 Marbelle and a black cove base.*

ARMSTRONG'S LINOWALL

Made by the makers of Armstrong's Linoleum

● Every architect knows that a reliable piping system for plumbing and heating is one of the most important factors in the building. It is a surprising fact that a great deal of thought and money is frequently spent on outward appearances, while vital matters are quite often taken for granted. Of course, the home should be modern in design, its kitchen, bathroom and laundry fixtures should be handsome and conveniently located... but unfortunately, good looks do not assure good service.

The efficiency of these modern fixtures and the very livability of the home itself depend upon a permanently reliable piping system for the plumbing and heating — in a word — a STREAMLINE COPPER PIPE AND FITTINGS SYSTEM.

STREAMLINE

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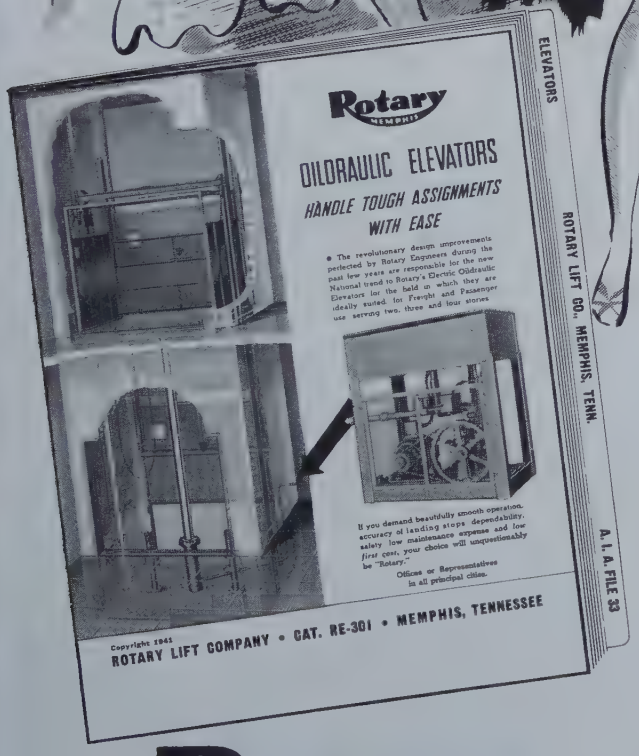
COPPER PIPE AND FITTINGS

STREAMLINE Copper Pipe connected with STREAMLINE Fittings assures a piping installation that incorporates tremendous resistance to rust, clogging and vibration. More than that, its cost is little, if any higher than materials that corrode and leak after a few years of service.

STREAMLINE affords a permanently reliable conducting system that insures efficient service from fixtures and radiating units year in and year out. With the possible exception of abnormal water conditions, STREAMLINE will outlast the building in which it is installed.

For efficiency as well as appearances, specify STREAMLINE Copper Pipe and Fittings.

"What Will They Think of Next For NATIONAL DEFENSE?"



What these young things don't know is that smart industrial builders were eliminating penthouses from their budgets long before the advent of National Defense! National Defense, however, has given a terrific impetus to the trend towards Rotary Oildraulic elevators which push loads up instead of pulling them up!

And well it should be. For travel up to 40 feet Rotary Elevators not only eliminate the necessity for expensive penthouses and load bearing columns but they are definitely superior in many other ways. You have positive control . . . velvety smooth operation . . . accurate floor stops; all this plus quicker installation at lower overall cost! You'll get the whole story when you send the coupon for the free Bulletin RE-301 which contains complete details on the many engineering refinements developed through Rotary's 16 years of experience as the world's largest builder specializing in oil-hydraulic lifting devices. Mail the coupon today.

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Tile-Tex MEETS HOSPITAL FLOOR REQUIREMENTS...

Main Lobby, Children's Memorial Hospital, Chicago. Puckey & Jenkins, Architects.

Operating Room Children's Memorial Hospital, Chicago.

because:

1. Its asphalt-asbestos composition wears like a highway . . .
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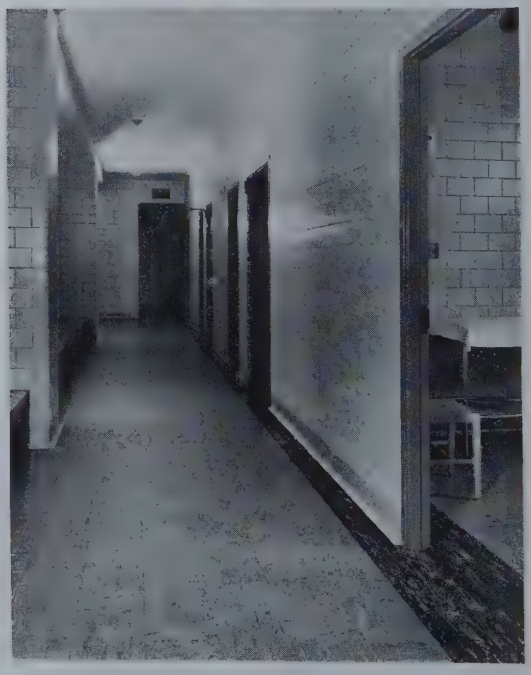
3. Its first cost is extremely low, and its final cost is lower than any other type of resilient floor of comparable thickness . . .
4. Its 60 colors and 15 sizes mean unlimited pattern and design variety . . .
5. It can be installed quickly and easily since it is laid in units. It can be used at once and repaired without difficulty if damaged.

Let our designing department help you in suggesting floor layouts for your hospital clients; or see Sweets, pages 11/64, for color and design ideas.



Corridor, Children's Memorial Hospital, Chicago.

OUR CONSTANT OBJECTIVE is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.

The TILE-TEX Company

EASTERN SALES OFFICE: 101 Park Ave., N. Y.
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MODERN POWDER ROOMS like this express the hospitality of thoughtful hostesses. Sleek Black Vitrolite wainscoting and black inlaid flooring lend a tone of elegance. A mirror of L·O·F polished plate glass gives true reflection of the feminine charm which lingers before it. Yellow painted walls and the gold of the draperies are matched by the yellow colored jointing in the Vitrolite wainscoting.

FOR PLACES WHERE A HOME SAYS... "WELCOME!"

● Those couples who take pride in playing hospitable host and hostess may be among your next clients. May we suggest, then, that you let Libbey·Owens·Ford glass help you provide the spots which must say "welcome" to their guests?

Already, these families have been admiring the unusual Glass Designed for Happiness suggestions presented through Libbey·Owens·Ford advertising in their favorite magazines. They are pre-sold on the beauty and sparkling welcome which quality glass will give their home. They are ready to approve your plan which includes modern glass arrangements.

Nearly thirty million full color printed messages have told the story of Libbey·Owens·Ford Glass Designed for Happiness. Told it to sixty-five million readers—in the income class you serve. Libbey·Owens·Ford Glass Company, Dept. PP1141, Nicholas Building, Toledo, Ohio.

A LITTLE GLASS in a doorway often is sufficient to overcome the severe appearance which might be caused by complete wood construction. Give your residential doorways the gay and cheerful touch bestowed by L·O·F Quality Glass.

NOW YOU SEE a miniature beverage bar, one of the many pleasing and different suggestions put before your clients in the L·O·F Glass Designed for Happiness promotion. The mirror background creates the illusion of added depth.

●

NOW YOU DON'T see the beverage bar. It has been converted into a handy powder station for the ladies. The clear, true-reflection mirror of L·O·F Polished Plate Glass expresses a warm welcome to guests who want to keep looking their best.

L O F

LIBBEY·OWENS·FORD

Glass **Designed for Happiness**

FOR MASSES OR ACCENTS OF

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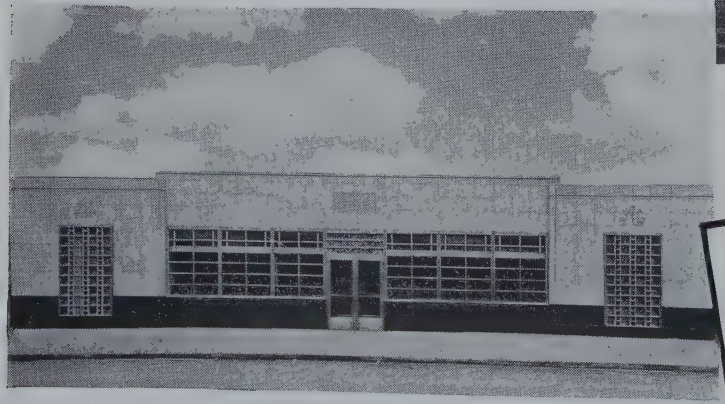
★ **permanent**

★ **economical**

★ **readily available**

The economy and versatility of Black Serpentine have been demonstrated by hundreds of designers and architects, on modernization as well as for new construction. Black Serpentine meets the demand for a black material which will retain its color and maintain its polish, without being reflective nor mirror-like. It is ideal for panels, bulkheads, facing and spandrels. Because this quarried stone has great toughness and density it can be cut into sections as thin as 7/8". A request on your business letterhead will bring you samples, conveniently boxed, showing the range of stone, including black and mottled dark blues and greens. Please address Alberene Stone Corporation of Va., 419 4th Avenue, New York. Sales Offices in Principal Cities. Quarries and Mills at Schuyler, Virginia.

Black Serpentine Bulkheads and Vertical Shaft; Lyon Van & Storage Co. Bldg., Beverly Hills, Calif.; V. F. Rible, Architect.



Black Serpentine Base and Wainscoting; Terre Haute Mutual Savings & Loan Assn., Terre Haute, Ind.; Miller & Yeager, Architects.

Alberene

BLACK SERPENTINE

Moderate in cost . . . Negligible in upkeep

Enchanting Studio Window Effect with STOCK SIZE Pella CASEMENT WINDOWS

Designed by Howard Stone, Rochester, N. Y., architect, the near story and a half height is gained through use of 3-light-high fixed transom units. Note how Mr. Stone has achieved added individuality by facing the mullions with ornamental wood trim of his own design. Arthur M. Windsor of Rochester was the contractor.

OVER 300 DISTINCTIVE COMBINATIONS POSSIBLE

YOU can easily achieve strikingly new and original window creations such as the one above, with stock-size Pella Casement units. Ventilating units can be supplied in stock sizes 1, 2, or 3 lights wide and up to 5 lights high to set singly or in combination with other fixed or ventilating units. Any or all muntins can be omitted at no extra cost. Corner and angular mullions of any degree are also available. Pella Casements fit all types of wall construction and harmonize with practically all styles of architecture.

FAMOUS Pella FEATURES

ROLSCREENS — The original inside screens that roll up and down like window shades. They preserve the beauty of your window designs since they are practically invisible when in use. No putting up—no taking down. Rolscreens are a major convenience your clients will always appreciate. 10 year guarantee.

DUAL GLAZING — Consists of removable single panel Libbey-Owens-Ford DSA glass set in rubber lined cadmium plated steel frame — practically invisible. Insulates against summer heat and winter cold. Meets all the requirements of modern air conditioning. Installed on the inside, Pella dual glazing panels are easy to remove and keep clean.

WEATHERSTRIPPING — Spring bronze compression type. Tension easily adjusted. The tighter the window is closed, the tighter this special stripping seals against drafts and moisture. Will not clog by painting. An exclusive Pella design feature.

WELDED STEEL FRAMES — Constructed of 16-gauge, rust-proofed, galvannealed steel — full jamb width $5\frac{5}{16}$". Frames are faced with clear White Pine (other woods if desired). Genuine White Pine sash — toxic treated. This construction guards against sagging and insures perfect closure at all times.

SAVE DRAFTING TIME! *New! 22 loose pages of scaled details on Pella Casement Units. Suitable for tracing right into your plans. All types of installations. Come in A. I. A. File Folder. Send for your FREE set! Supply limited!*

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YES, I would like to receive a FREE set of Pella Casement details as described.

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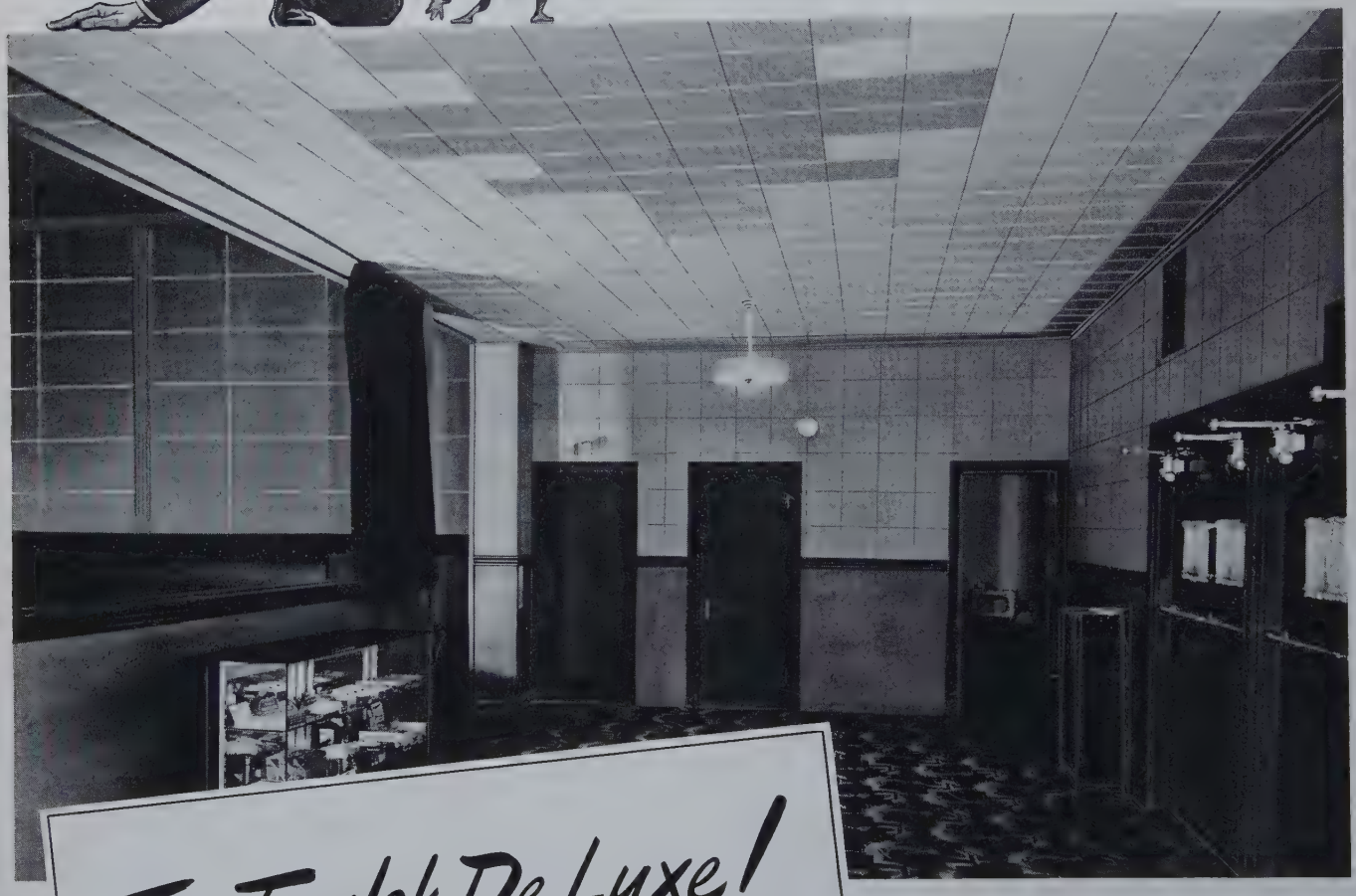
Pella CASEMENTS

ROLSCREENS • VENETIAN BLINDS

SEEKING SPECIAL WALLS AND CEILINGS?



Try Temlok De Luxe!

A CEILING STEALS THE SHOW *in the Orleans Theatre Lobby, Orleans, Mass. This stylish effect was created by combining 12" x 12" panels of Temlok De Luxe in two colors. Walls are 12" x 12" White Temlok Panels. Architect: Herman L. Feer, Boston. General Contractor: Samuel W. Poorvu, Boston.*

MANY offices, theatres, and other buildings have special requirements for walls and ceilings. Some, for example, need unusual decoration combined with acoustical correction. Others need insulation and decoration, but can't work *both* into the building budget. Whenever *your* clients have special needs like this, here's the inexpensive way to meet them—try Temlok De Luxe!

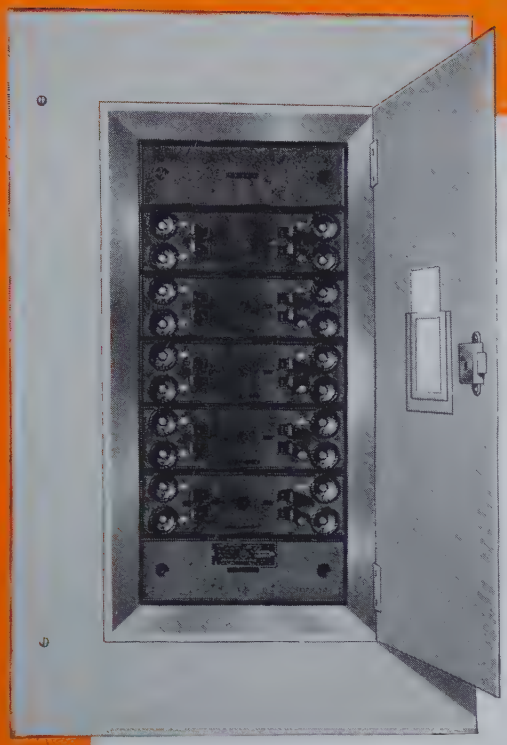
Armstrong's Temlok De Luxe is a truly modern interior finish which provides efficient insulation. It is made in several attractive, fadeproof shades and in panels, planks, and boards which may be combined into unusually effective wall and ceiling patterns. The fibrous composition of Temlok De Luxe gives valuable sound-absorbing qualities; the various pastel colorings reflect both natural and artificial light with unusually high efficiency.

Time and money saved on the job is another important Temlok "plus." In new construction, this easily applied insulating board *replaces plaster and paint or wallpaper*—thus eliminating expensive delays while plaster dries! In remodeling, Temlok De Luxe can be quickly installed right over existing plaster walls and ceilings.

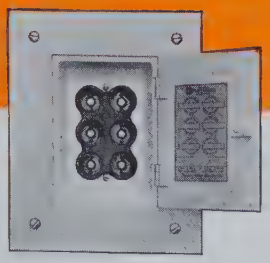
On your next "special" job, include *all* these features of Armstrong's Temlok De Luxe . . . *at one reasonable cost!* For full descriptive and installation details, see "Sweet's," or write today to Armstrong Cork Company, Building Materials Division, 911 Concord Street, Lancaster, Pa.

ARMSTRONG'S TEMLOK INSULATION

De Luxe Interior Finishes • Lath • Sheathing • Hardboards • Monowall



Installation in plant of The Blanton Company, makers of "Creamo" Margarin, St. Louis . . . Dennison-Loepker Electric Company, St. Louis, Electrical Contractors.



Type FBX-Enclosed Cutout. Capacity: 2 to 24 circuits. Use: Residential and small commercial installations where no switch control is required.

Type LNT1P-Panelboard. Capacity: 4 to 42 circuits. Use: Any installation where switch control of circuits at panel is preferred.

Type NR3G-Panelboard. Capacity: 4 to 32 circuits. Use: Any installation where only local control of outlets is required, and larger size gutters are needed.

There are Many Places

where one or more of the complete range of

Fuse Type Branch Circuit

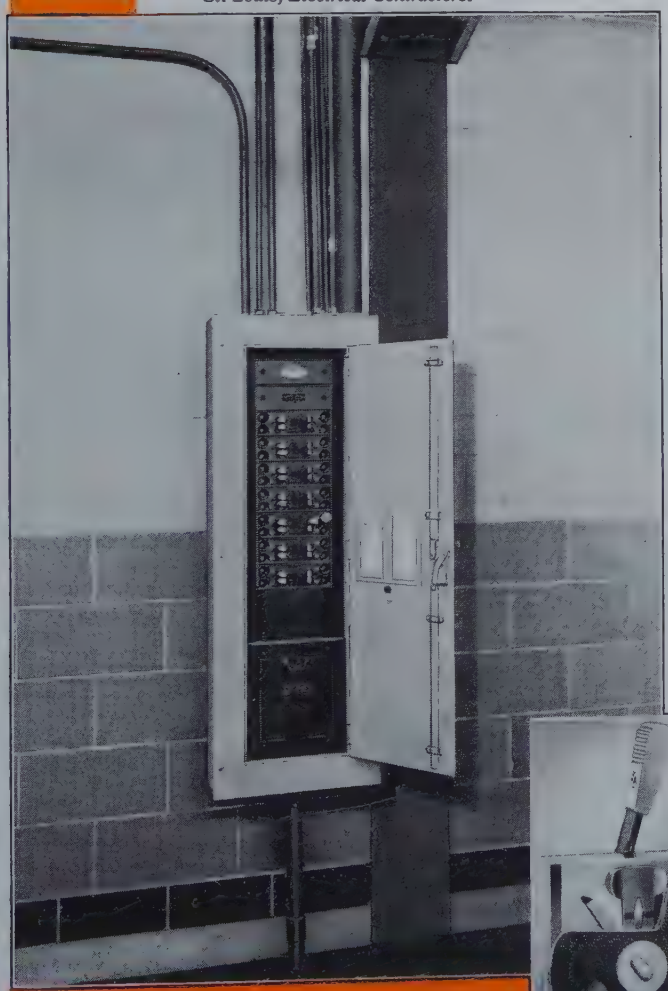
FA PANELBOARDS

for LIGHTING and APPLIANCE

use, will fill the bill exactly—meeting the approval of the architect, the contractor and the owner. Safety, modern protection and attractive appearance are embodied in each panelboard.

Ⓕⓐ Panelboards are dead front safety type, built of *standardized* molded sections, installed in *standardized* cabinets. This standardization expedites production, improves the product and lowers the cost. They are available with either fuse only, or switch and fuse branch circuits. Because of the improved type of non-tamperable fuses, with greater time-lag characteristics, which hold on momentary overload, but blow on short circuit or sustained overload, maximum protection—at moderate cost—is obtained. These safety-type panelboards, with cabinets, for flush or surface mounting, may be had with from 4 to 42 circuits. Boxes have ample knockouts in top and bottom, and ample gutter space for wiring. Adjustable supports permit an outward adjustment of 3/4" for plumbing the panel, if the box is installed out of alignment. Fronts are attractively finished in pearl gray lacquer.

Prompt Delivery: *There is a wholesaler near you who will make prompt delivery from stock . . . Write today for his name and address and for complete catalog information . . . . Frank Adam Electric Company, St. Louis, Missouri.*



The simple design, yet rugged construction, 30 amp. Ⓕⓐ Tumbler Switch used in LNT1P Panelboard.

EST. 1891 THE SIGN OF A BETTER JOB

Frank Adam

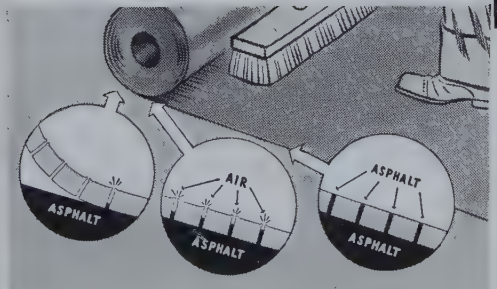
1891 FIFTY YEARS SERVICE 1941

FRANK ADAM ELECTRIC CO.
ST. LOUIS, MO. U.S.A.

BUT THIS ROOFING FELT IS FULL OF HOLES!

IT CERTAINLY IS! These millions of tiny holes in new J-M Perforated Asbestos Felts actually make a better built-up roof

HOW J-M PERFORATED FELTS MINIMIZE BLISTERING



The diagrams above illustrate the action of the J-M Perforated Asbestos Felt. Note how the air is first forced out through the perforations as the felt is laid, then how each tiny "vent" is completely sealed by the hot waterproofing asphalt when the felt is broomed in.

HARD TO BELIEVE? Maybe—but not when you know the facts. The holes punched in J-M Perforated Felts are the result of intensive research and testing. Here's how they operate:

As the felts are laid, the tiny perforations permit trapped air to escape. Result: No objectionable "air pockets" . . . blistering troubles practically eliminated! Yet when the waterproofing asphalt is applied, the holes are completely sealed. And because these holes add new flexibility, J-M Perforated Felts are more quickly broomed into place, adhere snugly to each other and to the roof deck!

Like all J-M Asbestos Felts, the new J-M Perforated Felt forms a built-up roof that is rotproof . . . that provides maximum protection against fire . . . that needs no protective coating to withstand the drying-out action of the sun. No wonder so many architects say: "This is exactly the type of material we've been looking for!" For details, write Johns-Manville, 22 E. 40th St., New York, N. Y.

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An Architect's Opinion

of defense construction advantages in

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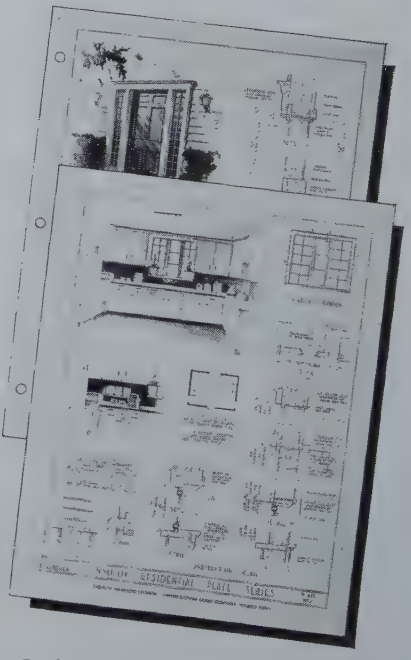

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This new Carrier Unit Heater can deliver heated air in 5 directions

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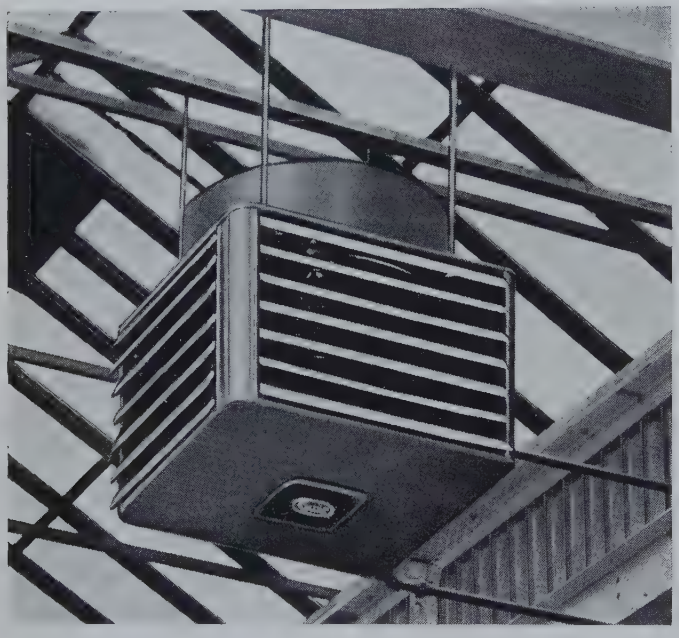

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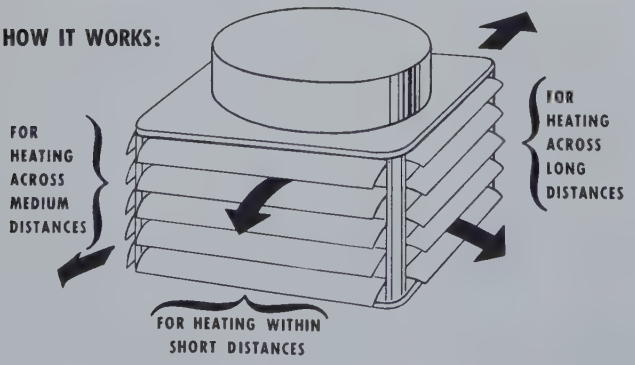

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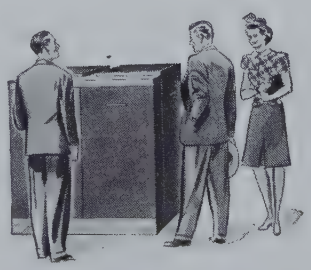

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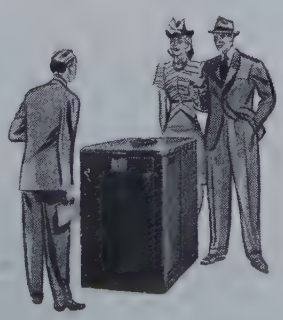

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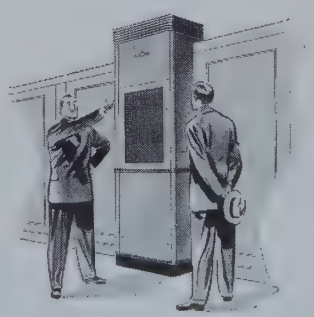

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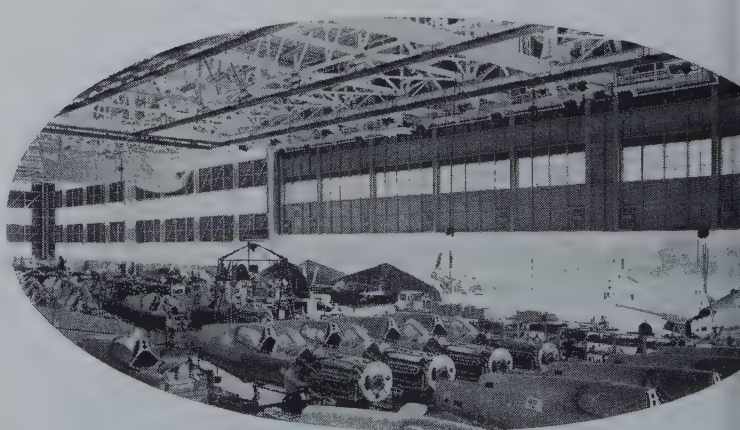

Interior view, Curtiss-Wright Corp. assembly plant, Buffalo, New Yo
ALBERT KAHN, Inc., *Architects & Engineers*
JOHN W. COWPER CO., Inc., *General Contractor*

Other Republic Steel Products used in Curtiss-Wright plants include steel pipe, Electrunite boiler tubes, and Berger bar racks, storage cabinets, steel shelving, tote boxes, lockers, and special material handling racks and equipment.

TRUSCON STEEL BUILDING PRODUCT

VOLUME XXII NUMBER 11 NOVEMBER, 1941

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WHAT GOES ON HERE?

EDITORIAL COMMENT BY KENNETH REID

As we pointed out on this page a year ago, the experience of the English building industry indicated strongly the desirability—from both its own point of view and that of its country's defense—of establishing a single powerful government authority combining "comprehensive factual knowledge of the building industry's resources, the power to keep them replenished against future demands, and the duty of allocating them as needed by the several Service and Supply Departments." The British finally created such an authority after many needlessly lost months of confusion. Today, we are told, all British architects and other building industry workers are busy. We have not yet acted.

The OPM has, perhaps naturally, been concerned with the relatively closely-organized manufacturing industries. None of its divisions has so far apparently appreciated the importance of the building industry *as a unit* for defense—or if it has, there has been no power delegated to coordinate and organize the industry's resources in accord with any well developed plan. One of the results is the recent S.P.A.B. order denying priorities to non-defense construction and threatening thousands of workers, including architects, with loss of employment. Was this drastic step necessary?

It is high time that intensive study should be given to the problem—but it won't be given unless someone in government is intelligent enough to realize its significance and is granted authority to act. Advisory committees or individuals loosely fastened to the outskirts of OPM won't work. There should be an office co-equal with other OPM divisions and this office should have both understanding of the building industry and authority to maintain it as a going concern. To permit its even partial disintegration is a disservice to the nation.

F.S.A. DESIGNERS

The presentation on pages 709-720 of the work of the designers of the Farm Security Administration communities is of exceptional interest as representative of what can be accomplished by thoughtful and ingenious men relieved of some of the restrictions imposed elsewhere by building ordnances and codes. Furthermore, building as they did in open country, the cost of land was not a hampering influence on planning. This work may, therefore, reasonably be considered as pointing toward possibilities for the future when building codes will generally be brought up-to-date and land values in urban communities may be readjusted in accord with rational public interest.

The work shown comes from one district only. This is no reflection on the merit of F.S.A. work in other sections of the country which, though possibly less spectacular, is nonetheless being done with the same intelligent attitude of mind. Credit should be given to the personnel of District Six, San Francisco, comprising the following: Herbert P. Hallsteen, District Engineer; *Architects* Burton Cairns, Vernon DeMars, Lucien Stark, William Edie, Arthur Steiner, Howard Sweeting, Robert Williams, and Frank Thompson; *Landscape Architects* Garrett Eckbo and Milton Butts; *Engineers* Nicholas Cirino, John Clark, Harry Donaldson, Edward Kelly, Eion McKay, Winsor Wilkinson, John Raymond, Gunnar Halle, Harold Edelstein, George Davis, and Allen Crenshaw; *Construction men* Granville Shumaker, C. E. Torkelson, and Armond V. Cox.

The whole of this organization is under the direction of John Donovan, *Chief Engineer,* Washington, D. C.

PUBLIC RELATIONS

Special attention is called to the article by Carlton K. Matson, on page 735. Perhaps some word is needed to establish Mr. Matson's qualifications for telling the architectural profession some of the things it could do for itself. As a former chief editorial writer for the *Cleveland Press* and former Editor-in-Chief of the *Buffalo Times* and of the *Toledo News-Bee,* he may be granted an authoritative voice on the importance of careful use of language to influence public opinion. As a former Public Relations Director for the Libbey-Owens-Ford Glass Company, he had plenty of opportunity to study the nature of the architect and his practice. At present he is a member of the firm of Martin Dodge and Carlton K. Matson, Public Relations Counsellors, New York. He knows his stuff!

Spence Air Photos

FOLLOWING THE CONTOURS, THE ARCHITECTS EVOLVED A VARIED ARRANGEMENT OF BUILDINGS, OF WHICH THE CHEVRON PATTERN IS A PROMINENT FEATURE. FOUR COMBINATIONS OF COLORS OF INTEGRAL PIGMENT ON THE EXTERIORS GIVE THE BUILDINGS A PLEASING EFFECT. THE PLANTING OF TREES, SHRUBBERY, AND GRASS WILL SOFTEN THE STRAIGHT LINE EFFECT, HELP TO MERGE THE BUILDINGS INTO THE LANDSCAPE

HARBOR HILLS HOUSING

WITH COMMENTS BY CLARENCE S. STEIN

An attractive site, developed with careful architectural design, has made Harbor Hills, a USHA housing project sponsored by the Housing Authority of the County of Los Angeles, one of the most attractive of the public housing developments in the country. Architects on this project were Reginald D. Johnson, Chief Architect; Donald B. Parkinson, Eugene Weston, Jr., Lewis Eugene Wilson, and A. C. Zimmerman, Associates. Clarence S. Stein was Consulting Architect. Landscape architects were Katherine Bashford, and Fred Barlow, Jr.

LOCATION. Harbor Hills is situated in the picturesque San Pedro Hills in California, overlooking San Pedro Bay, one of the great centers of defense activities.

TENANTS. In spite of the closeness to the expanding industrial area of San Pedro, where there are thousands of workmen who cannot find decent homes, Harbor Hills is renting slowly. The defense workers are unable, for economic reasons, to use these houses that the Government has just finished. Their wages are not too small—they are too high. USHA regulations limit the income of those who may dwell in housing built with USHA funds to low income workers. (In the case of the County of Los Angeles, those receiving $1,500 a year or less. Defense workers of the San Pedro district are receiving far more than that).

So, although Harbor Hills is having difficulty securing sufficient tenants to fill its attractive apartments, there are thousands of defense workers who can find no decent homes in the San Pedro area.

SITE PLAN. Much of the site is in deep canyons or gullies, and only 27 acres out of 102 acres could be used economically for housing. Buildings are grouped around large parking areas, 54 feet wide, with room for off-street parking for all of the tenants. Following the contours, the architects evolved a varied arrangement of the buildings in a chevron pattern, thus making the project a relief from the endless repetition of parallel rows of similar buildings that one has come to think of as "public housing."

EXTERIOR COLOR. Interesting note in this project is the variety in the texture and color of the buildings. Four combinations of colors of integral pigment have been used on the exteriors—green, apricot, white, and light sand, with a dado of darker tone giving base to the buildings and a horizontal tie to the architecture. There is additional horizontal tie in the texture of the brick work connecting or forming the base to the long horizontal mass of the windows. There

Photos by W. P. Woodcock

BUILDINGS ARE GROUPED AROUND LARGE PARKING AREAS, 54 FEET WIDE. THERE IS ROOM FOR OFF-STREET PARKING FOR ALL OF THE TENANTS. THE SERVICE SIDES OF THE HOUSES FACE TOWARD THE PARKING SPACES. THESE "BACK YARDS", WHICH SEEM CROWDED AND DISORDERLY IN MOST OF THE LOW-COST HOUSING DEVELOPMENTS, HAVE HERE AN APPEARANCE OF ORDER, PARTIALLY DUE TO THE LOW WIRE FENCES THAT SEPARATE THE YARDS AND WHICH IN TIME PROBABLY WILL BE COVERED WITH VINES. THE LIVING-ROOM SIDES OF THE HOUSES FACE GRASS LAWNS. THE THIN EDGE OF THE PROJECTING ROOFS AND OF THE CONCRETE HOODS OVER THE ENTRANCES, THE MASSING OF THE LONG ROWS OF METAL WINDOWS, ALL GIVE THE PROJECT A DEFINITE AND ATTRACTIVE RESIDENTIAL CHARACTER. THERE IS VARIETY IN THE TEXTURE AND COLOR OF THE BUILDINGS, AS IN THEIR SITE ORGANIZATION. THE DETAILING HAS DELICACY, RESTRAINT

is a delicate contrast of this with the flat surface of the brick and concrete surface of the rest of the wall.

PLAN. Space has been well organized in most of the plan. Stairs separating the kitchen and living room permit privacy in the latter rooms, a condition which is impossible in the frequently-encountered two-story plan with stairs parallel to dividing walls.

Doors, windows, and closets have been placed with proper consideration of living and furnishing requirements. Kitchens are particularly charming with the spacious, well-lighted, dining space. Equipment even includes a tiled drain board which, to the eastern architects, seems luxurious.

The small apartments on the second story of the two-story flats are reached by an exterior stair with a long balcony giving access to the service side of the apartment. But this arrangement is still questionable from the point of view of privacy. The architects met this problem by arrangement of windows, and by placing the living rooms on the other side of the flats.

CONSTRUCTION. Walls of the buildings are of grout-lock brick masonry. Floors and roofs are of concrete, the latter consisting of a single slab which was poured on a plywood form. The slight slope of the roofs is apparent in the ceiling of the upper story rooms. Floors are cantilevered out to form balconies and entrance door hoods. Partitions are two-inch cement plaster on metal lath over steel studs. Floors have cement tops with integral color dusted in the slab. As yet there seems to have been no complaint by the tenants against the hard surface.

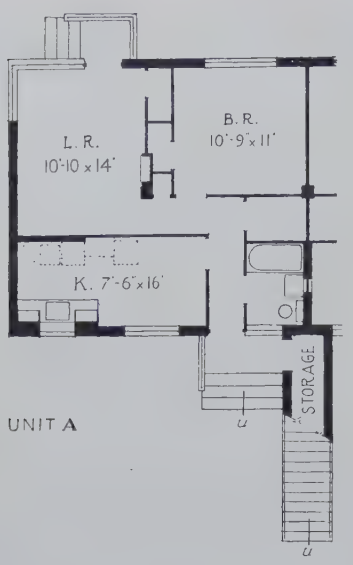
WINDOWS. Spacious windows supply adequate light and air to all the rooms and do not deprive them of necessary furniture space. Corner windows, which are generally questionable from the point of view of ventilation, are particularly successful in the dining room section of the kitchens where they permit broad views and sunny exposures.

INTERIOR FINISH. Interior walls have a base coat of cement plaster, and all cement ceilings are painted. Kitchens, dining space, and bathrooms have a finished coat of Keene's cement and enameled paint. Other rooms have a finish coat of integral color with sand finish. Different colors have been used in the various rooms. The integral colored stucco is difficult to patch, and to protect the walls from damage a picture molding has been set into them.

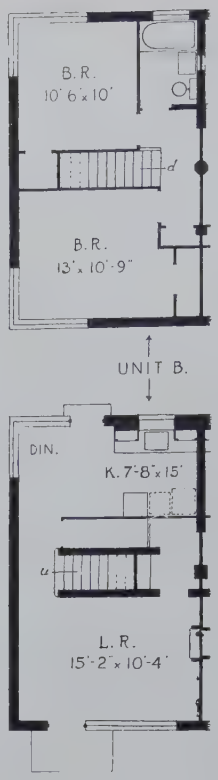
COMMUNITY EQUIPMENT. A small project such as Harbor Hills, with 300 family units, must be limited in the extent to which it can afford community equipment. Larger developments have the advantage of being able to afford more adequate and varied community space and service. Therefore, wherever it is practical, it would seem advisable to organize public housing in developments large enough to supply com-

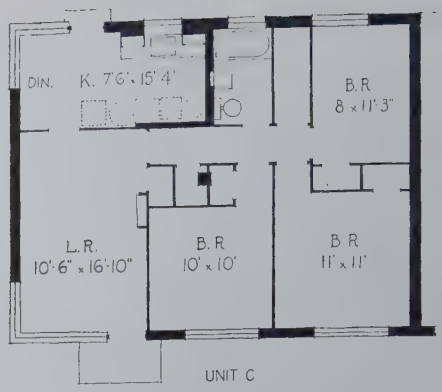
(Continued on page 683)

THE SITE CONSISTS OF 102 ACRES, MUCH OF IT IN DEEP CANYONS. BECAUSE OF THE HILLY TOPOGRAPHY ONLY A VERY LIMITED AREA COULD BE USED ECONOMICALLY. THE 52 BUILDINGS ARE ON 27 ACRES OF LAND

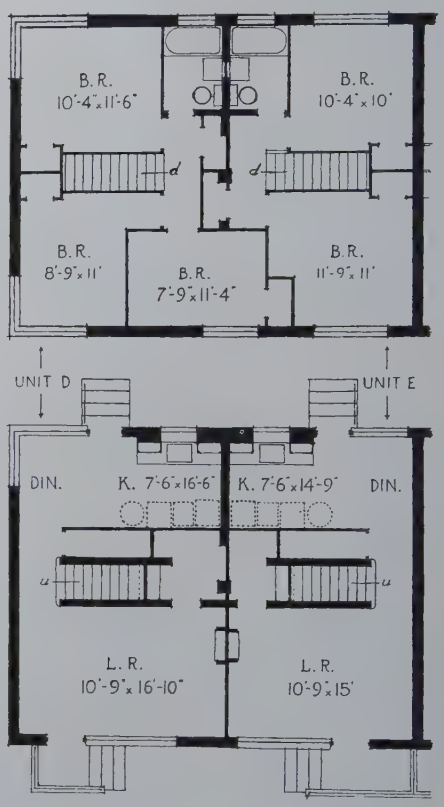


UNIT A

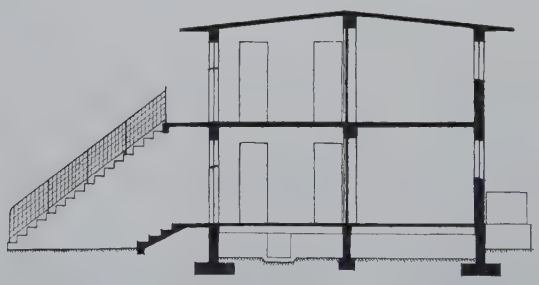




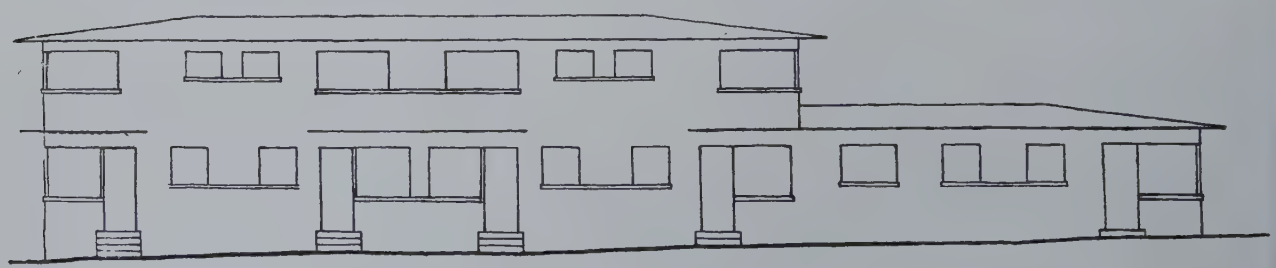
UNIT C

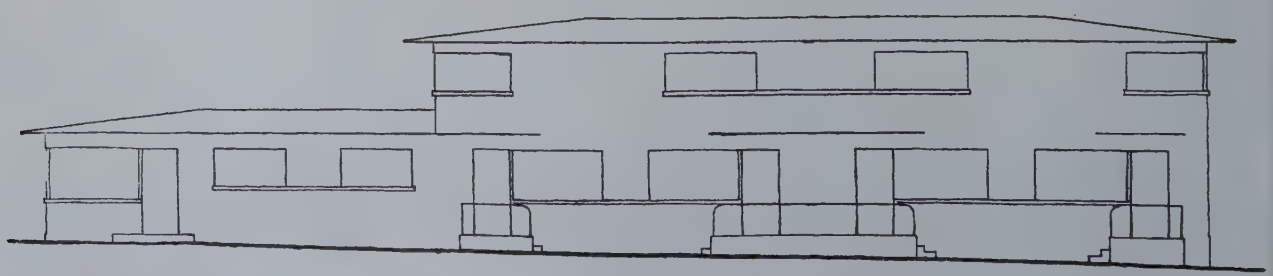


SPACE HAS BEEN WELL ORGANIZED IN MOST OF THE PLAN. IN UNITS A AND C THE ROOMS ARE ALL ON ONE FLOOR; ROOMS IN THE OTHER UNITS ARE ON TWO FLOORS. IN UNITS B, D, AND E, THE STAIRS SEPARATING THE KITCHEN-DINING AREA FROM THE LIVING ROOM PERMIT PRIVACY IN THE LIVING ROOMS. SMALL APARTMENTS ON THE SECOND STORY OF THE TWO-STORY FLATS ARE REACHED BY AN EXTERIOR STAIR (SEE CROSS SECTION) ON THE SERVICE SIDE



TWO TYPICAL ELEVATIONS ARE SHOWN BELOW. AT TOP IS THE SERVICE ELEVATION OF A COMBINATION TWO-STORY BUILDING WITH A ONE-STORY APARTMENT AT THE END. BELOW THAT IS THE GARDEN ELEVATION

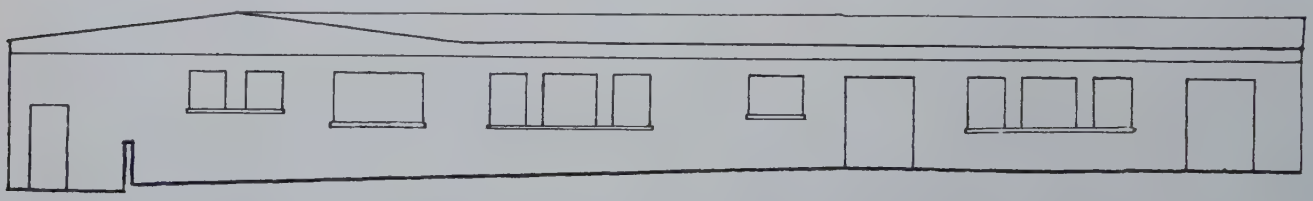


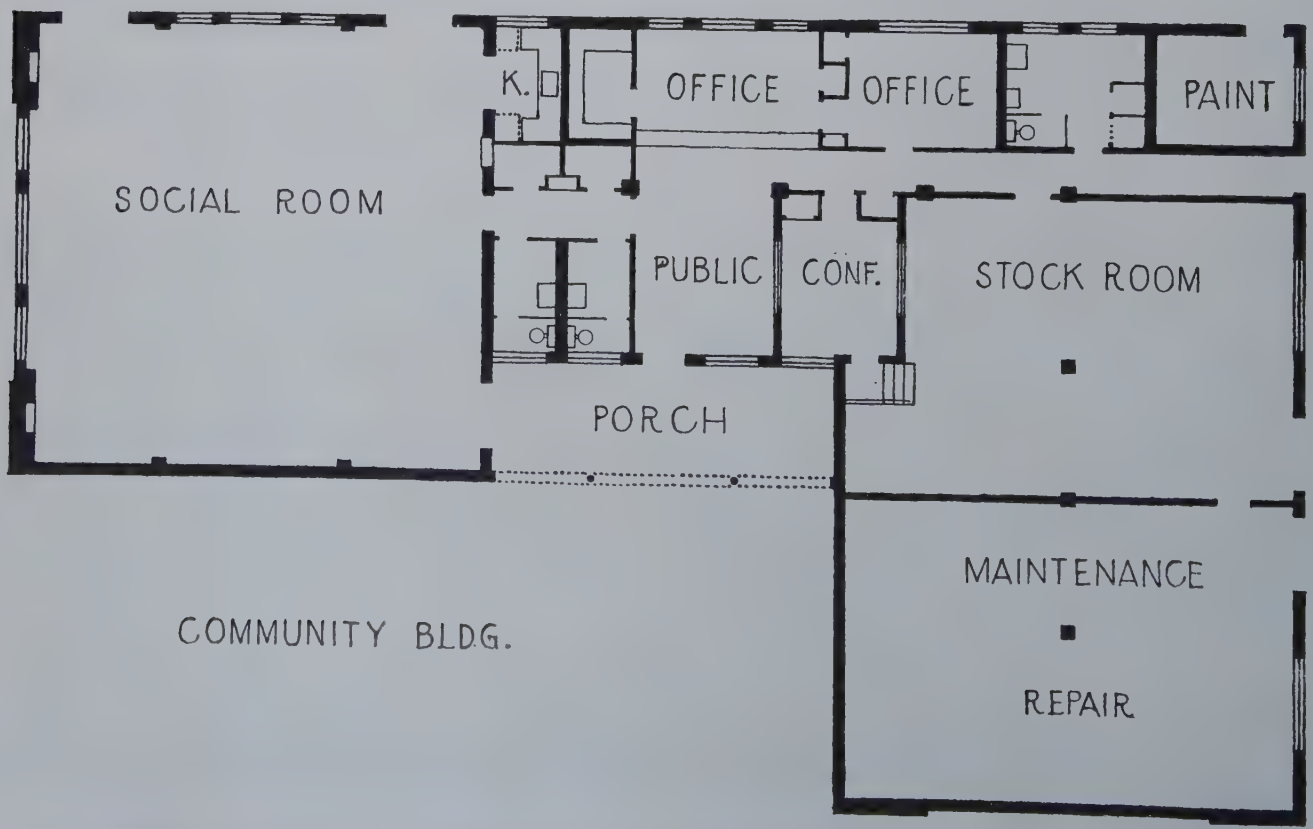


THERE IS A PLEASING VARIETY IN THE MASS OF THE BUILDINGS, PARTIALLY DUE TO THE WELL-PROPORTIONED ONE-STORY HOUSES ATTACHED TO THE TWO-STORY GROUPS. IN SOME UNITS, CONCRETE FLOORS ARE CANTILEVERED OUT TO FORM BALCONIES AND DOOR HOODS. THERE IS NO SLIPPERY ICE TO BE GUARDED

AGAINST IN LOS ANGELES COUNTY, SO ONE OF THE OBJECTIONS TO THIS SCHEME, WHICH EXISTS IN THE NORTH, IS NOT PRESENT HERE. THE ILLUSTRATION BELOW SHOWS THE STAIRS ON THE SERVICE SIDE

THE NURSERY SCHOOL (ELEVATION ABOVE, AND PLAN ACROSS-PAGE) HAS BEEN PLACED IN ONE OF THE TWO-STORY RESIDENTIAL BUILDINGS. THE SPRAY POOL FOR YOUNGSTERS, ADJACENT TO THE NURSERY, HAS A SHALLOW CONCRETE BASIN WITH SPRAYS IN SHELL-SHAPED CONCRETE BLOCKS. THE PLAN OF THE WELL-ARRANGED COMMUNITY BUILDING SHOWS THAT A GREATER PART OF THE BUILDING HAS BEEN DEVOTED TO ADMINISTRATION. THERE IS A PUBLIC OFFICE, MANAGER'S OFFICE, SPACE FOR WORKSHOP, STORAGE, AND GARAGE. THERE ARE NO CLUB ROOMS EXCEPT FOR THE SOCIAL ROOM, WHICH HAS A SMALL KITCHEN OFF TO ONE SIDE. BECAUSE OF THE SMALL AREA THAT COULD BE USED ECONOMICALLY AS A BUILDING SITE, THE COMMUNITY BUILDING AT HARBOR HILLS HAS NO PLAYGROUND ADJACENT TO IT. (ELEVATION BELOW)

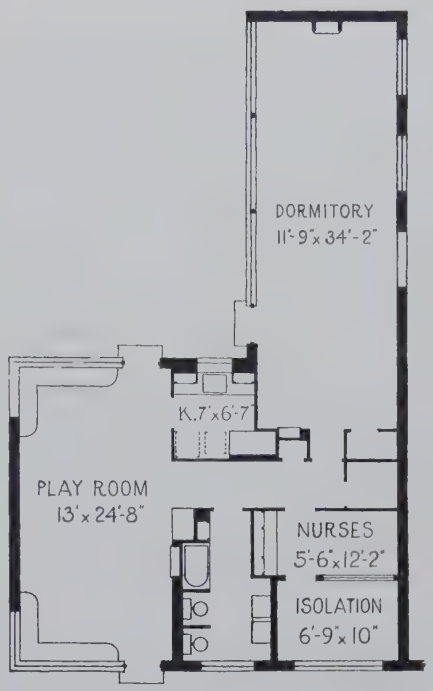




(Continued from page 679)

munity equipment that can be administered with maximum economy.

COSTS. The approximate development costs covering the 300 dwelling units, nursery, and administration building, is $1,300,000. This is apportioned as follows: site acquisition, 1%; structures and equipment, 80%; site improvements (including grading, streets, paving, sidewalks, curbs, sewer system, electric system, gas system, water system, plus pumps, storage, pressure tank, etc.) 15%; landscaping, 2%; carrying charges, 2%. These items, except of course the carrying charges, include their proportions of overhead—administrative, architectural, and engineering costs. The over-all cost for the completed project is about $4,300 per dwelling unit. The average construction cost of the dwelling unit itself, exclusive of other costs, is about $2,750 per dwelling unit.



NURSERY

WALLS OF THE BUILDINGS ARE OF GROUT-LOCK BRICK MASONRY. FOUR COMBINATIONS OF COLORS OF INTEGRAL PIGMENT HAVE BEEN USED ON THE EXTERIORS: GREEN, APRICOT, WHITE, AND LIGHT SAND. A DADO OF DARKER TONE GIVES A BASE TO THE BUILDINGS AND A HORIZONTAL TIE TO THE ARCHITECTURE

Photo by DePue, Morgan & Co., Inc.

THERE ARE 700 BUILDING UNITS ON THE 43-ACRE YESLER TERRACE DEFENSE HOUSING SITE LOCATED JUST OUTSIDE THE SEATTLE BUSINESS DISTRICT. THE SITE HAS AN ABRUPT INCLINE TO IT, AND MAGNIFICENT OUTLOOKS OVER PUGET SOUND. IT IS BECAUSE OF THESE VIEWS, THE CLOSE PROXIMITY TO THE INDUSTRIAL AREA, AND THE RELATION OF THE UNITS TO SCHOOLS, HOSPITALS, AND PLAYFIELDS, THAT YESLER TERRACE MIGHT BE CONSIDERED THE OUTSTANDING SITE IN AMERICA FOR THE ERECTION OF SUCH A HOUSING PROJECT

YESLER TERRACE HOUSING

DESCRIPTIVE NOTES BY J. LISTER HOLMES

Occupying some forty-three acres on a hill immediately above the downtown business district of Seattle, Washington, is the Yesler Terrace Housing Project, sponsored, under USHA, by the Seattle Housing Authority, and designed by a group of architects comprising J. Lister Holmes, William J. Bain, John T. Jacobsen, William Aitken, and George W. Stoddard. Landscape Architects were E. Clair Heilman and Butler Sturtevant.

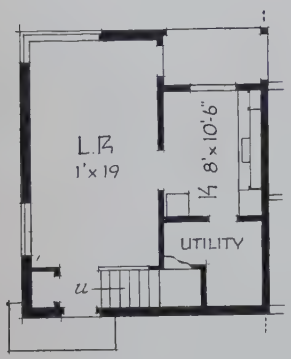
The location, also known as Profanity Hill because of the abrupt incline to it, has magnificent outlooks over Puget Sound. Because of these views, the close proximity of the industrial area, and the easy relation to schools, hospitals, and playfields, it is considered one of the outstanding sites in the country for a low rent housing project. Private enterprise had previously attempted to rehabilitate a large section of this district and found it impossible to finance.

The land value of nearly $10,000 an acre is about thirty times the value of outlying areas being used for defense housing projects. This factor required an average ultimate density of 17.4 units per acre for the finished project of 878 units, which includes the additional 178 units now being drawn. The present project of 700 units does not have that population density.

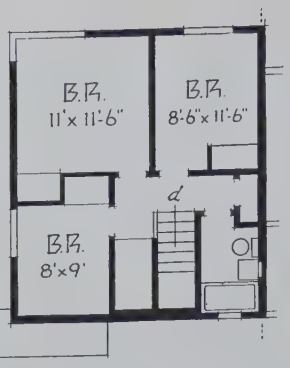
Another factor with which the architects had to contend was the fact that two power companies had distribution stations on the edge of the site, fairly lacing the district with high tension lines and poles. Moving these would be a costly item, hence designing around most of them was necessary. The architects did not like the thought of having small chimneys popping out of the roofs to throw smoke into the windows of the buildings above. With this in mind they investigated other possibilities, found that, because of the length of the buildings, it was feasible to design an economical central heating plant with forced hot water circulation. Estimates showed the operation of this plant would cost $2.50 less a unit per month than the next most economical method of heating. Despite rising construction costs, the architects report that the project will rent for a dollar less per unit than any other northern low-cost housing now constructed.

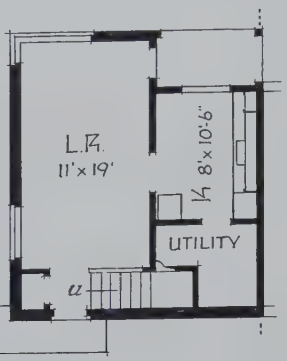
THE BUILDINGS WERE ORIENTED TO GIVE THE BEST EXPOSURE TO BOTH THE LIVING ROOM AND THE INDIVIDUAL GARDENS WHICH ARE PROVIDED. THE UNITS RANGE IN SIZE FROM 2½ TO 6½ ROOMS EACH

Photo by Ernst Kassowitz

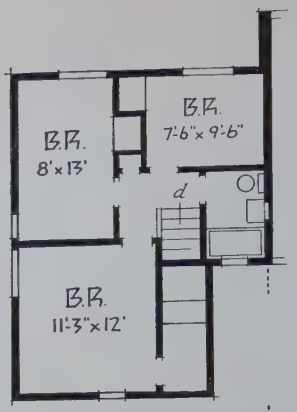


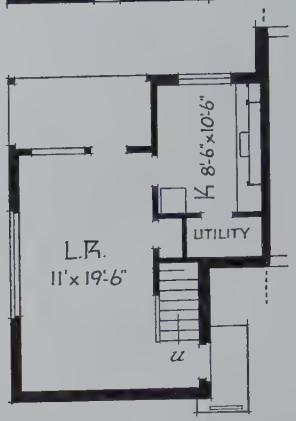
UNIT *A* HOUSES HAVE A KITCHEN, LIVING ROOM, FOUR BEDROOMS





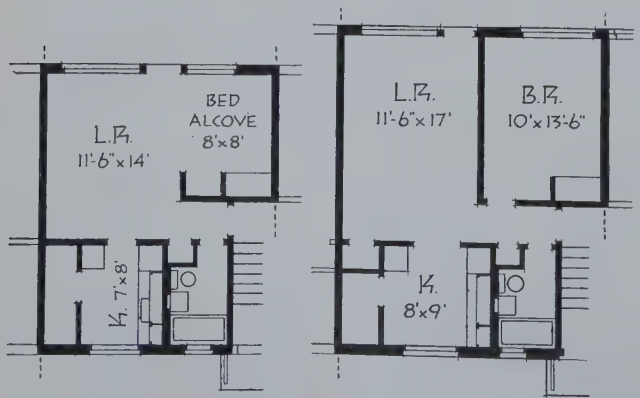
B UNITS HAVE THREE SECOND FLOOR BEDROOMS



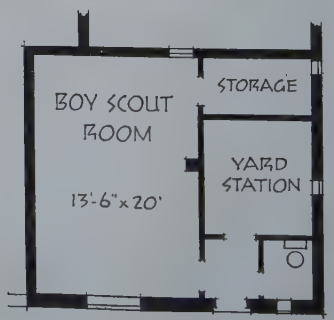


C UNITS ALSO HAVE THREE BEDROOMS

UNITS *D* AND *E* HAVE THE SAME FIRST FLOOR, DIFFER IN SECOND FLOOR LAYOUT. (UNIT *E* AT UPPER RIGHT)



UNITS *F* (LEFT) AND *G* (RIGHT) HAVE THREE ROOMS, ALL ON ONE FLOOR. UNIT *G* HAS A SEPARATE BEDROOM



BOY SCOUT ROOM AND YARD STATION PLAN AND ELEVATION

IN STUDYING THE TYPES OF HOMES TO BE CREATED FOR THE PROJECT, THE ARCHITECTS STUDIED MANY POSSIBLE TYPES OF EXTERIOR TREATMENT. ALTHOUGH BALCONIES ARE INDICATED ON THESE SKETCHES,

THE UNITS AS FINALLY CONSTRUCTED (PAGE 689) DID NOT UTILIZE THIS FEATURE. NOTE THE PROJECTING EAVES, THE GENEROUS USE OF GLASS. (THE FRONT COVER ILLUSTRATION WAS TAKEN AT THE PROJECT)

Photos by Louis H. Dreyer

Photo by DePue, Morgan & Co., Inc.

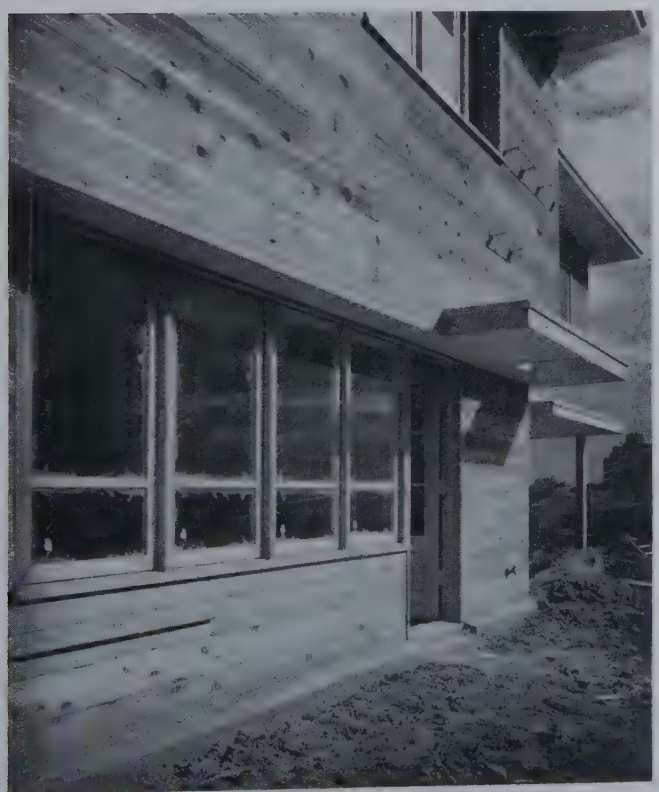
AS SEEN IN THE PRELIMINARY STUDY SKETCHES, THE ARCHITECTS DEVELOPED A COVERED WALK CONNECTING TWO OF THE UNITS (PERSPECTIVE SKETCH ABOVE). THIS ARRANGEMENT SERVES AS THE ENTRANCE TO THE GARDEN AREA BEYOND, FACES THE COMMUNITY BUILDING (SITE PLAN, PAGE 685). THE STUDY GIVES A GENERAL IDEA OF THE TOPOGRAPHY

Photos by Louis H. Dreyer

THESE PRELIMINARY STUDIES FOR ENTRANCE DETAILS ARE REPRESENTATIVE OF MANY MADE BY THE ARCHITECTS. THE DOOR HOOD (RIGHT) TILTS UP; THE DOOR FRAME TILTS OUT. A SIMPLER DOOR HOOD WAS MAINTAINED ON THE FINAL HOUSES (ACROSS PAGE). THE HOLE PROVIDES INTERESTING LIGHT PATTERNS

Photos by Ernst Kassowitz

THE EXTERIOR SIDING USED ON ALL THE UNITS IS CEDAR FLUSH BOARDING WITH A RAKED SURFACE, SIMILAR TO HANDSPLIT WORK. THIS SIDING IS PROTECTED BY A WATER-REPELLENT AND PRESERVATIVE, OVER WHICH A PIGMENTED GLAZE IS APPLIED. BARS ON THE OUTSIDE OF THE BUILDINGS, AND THE HOLES IN THE BALCONIES AND DOOR-HOODS, WERE PLACED THERE TO CONFORM TO THE SEATTLE BUILDING DEPARTMENT ORDINANCE WHICH REQUIRES A SECOND MEANS OF EGRESS IN MULTIPLE DWELLINGS. THIS SOLUTION SEEMED THE LEAST NOTICEABLE SINCE THE ARCHITECTS WANTED TO AVOID THE EXPENSE AND APPEARANCE OF FIRE ESCAPES ON THE GARDEN SIDES OF THE HOUSES. INDIVIDUAL GARDENS ARE PROVIDED FOR EACH UNIT



WORKING WITH USHA UNDER THE LANHAM ACT

BY ANTONIN RAYMOND

The purpose of this article is to examine certain aspects of my experience in working with the U.S.H.A. on one of the first projects under the Lanham Act.

The U.S.H.A. and other Government Agencies charged with the task of planning Defense Housing have been criticized for not employing individual architects more often, and have been blamed for doing work in an uninspired manner. Architects directly in the employ of the government have been accused of easily falling into a rut or merely

Photo by Air Photos

THE BETHLEHEM PROJECT IS BUILT ON A HILLY SITE, WITH AN EXCELLENT VIEW. (NOTE OLD HOUSES IN THE IMMEDIATE BACKGROUND.) EXPERIMENTAL HOUSES (TWO SINGLE-FAMILY UNITS, A SIX-FAMILY UNIT, AND A FOUR-FAMILY UNIT) WILL BE BUILT AT THE EXTREME RIGHT AND LEFT OF THE PROJECT

holding on to their jobs, with the result that their efforts have been unimaginative, dull, standardized, etc.

In my mind, professionals connected with low cost housing are divided into three distinct groups. I call the first group technicians, the second exterior and interior decorators, and the third a curious mixture of both. Unfortunately a great many architects belong to the second group, some to the third, and only a few to the first.

Most of the technicians are recruited from the ranks of builders and engineer-contractors who have been in the low cost housing field for years. Because of their long experience, these technicians try to find solutions based on the following: economic use of materials, economy of labor, short construction time, building techniques to suit varying labor conditions, rentals relative to tenant's income, national economy, politics as related to housing, livability in terms of conventional function, amortization, cost and ease of upkeep, nearness to communication lines and public utilities, etc.

The decorators are principally concerned with a preconceived idea of the exterior aspect and charm of both the site and the units. If they are "modern" they aim to produce something individualistic, astonishing, emotionally exciting, something "beautiful with a capital B," something that nobody thought of before, a *tour de force*; or if they are conservative, a charming eclectic stiff shirt. They are sincerely artistic and a too serious study of fundamentals would impede their inspiration.

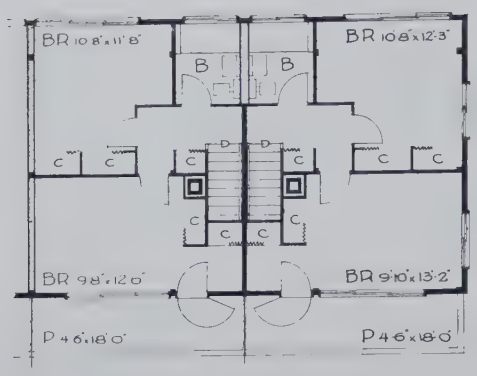
There is still a third group which is fairly interested in fundamentals, but primarily interested in business and therefore interested in the popular appeal of their products to the masses. Their product is a hodge podge combination of the results attained by the two previous groups. They call themselves "modern-but-not-radical," use a lot of corner windows, but use Lally-type columns in basements only,

During its existence the U.S.H.A. has probably employed more individual architects than any other government or private agency. However, in most cases the choice of the architects was made by *local* housing authorities who also selected the staff of supervisors. Naturally, local politics have influenced this matter. During this period of national emergency, the U.S.H.A. has, in its search for competence, broken with this procedure by appointing architects directly, and deserves credit for doing so.

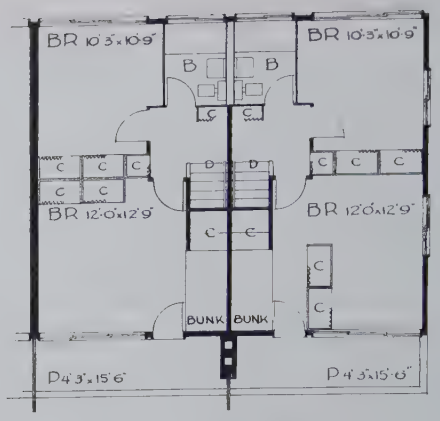
Years of experience taught the U.S.H.A. methods of a direct approach to designing housing projects. They established standards of appropriate minimum planning and construction requirements on lines parallel with established European standards. These U.S.H.A., and also F.W.A. standards served as a basis for the Defense Housing standards. The standards are open to criticism in one respect only—that is that they should be more in a state of flux than they are—modified as quickly as conditions, building methods, available materials, etc. change. But to criticize standardization as being os-

Photos by Cortland V. D. Hubbard

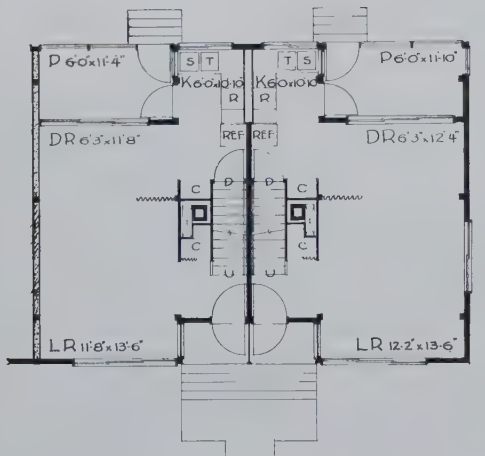
SINCE THE HOUSES HAVE NO BASEMENTS, A HEATING ROOM IS PROVIDED NEXT TO THE COAL BINS (SEE LOWER ILLUSTRATION.) AT TOP IS THE GARDEN SIDE OF THE PROJECT, WITH THE STREET SIDE PICTURED BELOW IT. ASBESTOS SHINGLES ARE USED. (THESE ARE NOT THE EXPERIMENTAL HOUSES)



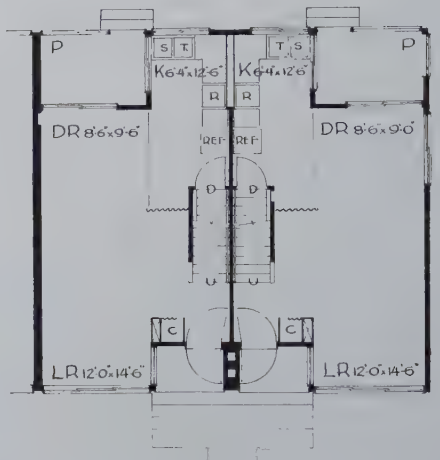
SECOND FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN



FIRST FLOOR PLAN

TWO OF THE EXPERIMENTAL UNITS ARE TWO-STORY HOUSES. ONE PLAN, (ABOVE, LEFT) UTILIZING AN ECONOMICAL COLUMN AND BEAM CONSTRUCTION, IS RAYMOND'S SOLUTION OF THE OPEN PLAN, WHILE THE OTHER PLAN USES THE CONVENTIONAL WALL BEARING STUD CONSTRUCTION. THE USE OF MODERN PLANNING, MATERIALS, AND CONSTRUCTION MAKE FOR A TOTAL LACK OF FORMALITY. THE SECOND FLOOR BALCONY HAS TRAFFIC TOP FLOORING. INCLUDED IN BOTH UNITS ARE HORIZONTAL SLIDING WINDOWS AND SLIDING DOORS BETWEEN THE REAR PORCH AND THE LIVING ROOM. ALSO IN BOTH HOUSES ARE RECESSED FRONT ENTRANCES AND SCREENED PORCHES AT THE REAR. FOR HEATING, PARTIAL BASEMENTS HAVE BEEN PROVIDED TO HOUSE THE INDIVIDUAL COAL-FIRED HEATING UNITS. ASBESTOS SIDING IS USED

sification is missing the sense of low cost housing design entirely. It is like complaining of keys and time in musical composition. Only a government agency can establish standards because it alone has the facilities for gathering and comparing the necessary data and for withstanding the pressure of private interests and politics.

Experience also taught the U.S.H.A. that there are only very few solutions for the three-, four-, and five-room units within the frame work of the established standards. New solutions and forms can be found only where there are changes in social habits, or radical changes in materials employed, requiring radically different construction methods. It is an evolutionary process, hastened by research and experimentation. It is the work of a large group in cooperation and not the work of an individual.

U.S.H.A. has difficulty in explaining to some of the newcomers amongst the architects the futility of trying to find some epoch making solution founded on artistic instincts, personal philosophy, abstract reasoning, or whatnot. It is indeed hard for the newcomers to swallow any standards and to understand the grim reality that what is required is knowledge of the standards, of building materials, building methods, our social structure and habits and therefore livability from the point of view of a workman, his wife and family; knowledge of politics, of mechanical, structural and civil engineering; and above all knowledge of two by fours and exact estimating.

Another grim reality to face is that the very existence of our Democracy depends to a great degree on the utmost saving of time, effort and materials and that this saving can be accomplished only by team work and coordination and not by the efforts of an individual shooting off on a tangent.

Government agencies should and do welcome architect-technicians and there are some men among them as clear-visioned, farseeing, and broad-minded, as there are anywhere. Their aim is to raise the standards by perfection of design and organization and not by raising expenditures. With this point in view, several architects have been asked to take a few units of their projects and experiment with them to obtain better livability, greater economy in materials and time of erection, as well as economy in upkeep.

Mr. O. Kline Fulmer of F.W.A. formulated this program in his letter to Mr. Clark Foreman, Housing Director of F.W.A.:

"The basic purpose of the Lanham Act is to provide dwelling units as rapidly as possible for many thousands of defense workers and their families. Due to the necessity for speed and the economic cost limit of $3,000 average per dwelling unit, the most logical and obvious plan is to follow as closely as possible the standard and conventional methods of construction. Experimentation with new and untried materials or construction methods involves certain elements of potential delay and doubtful cost that automatically rules out most of them from the program as a whole.

"However, it is highly desirable that the Federal government should not overlook the many opportunities for research into new plans, materials, or construction methods that are offered in line with a program of this magnitude and I am herewith offering a suggestion for taking advantage of the experimentation and research possibilities without endangering the bulk of the program."

The Proposal is as follows:

"1. When outstanding architects are selected to plan and supervise a defense project, they shall be instructed to design the project in conformance with the conventional 'U.S.H.A.' practice with the exception of a small group of 10 to 25 dwelling units on which they will be encouraged to experiment in plan, design, and construction. The bulk of the project will be planned and contracts will be let within the time limit set by the Government which, because of the need for speed, is too short to allow for much creative design or planning. But on the experimental group the architects will be allowed additional time (possibly another 25 days) in which to complete plans and specifications.

"2. The experimental houses must be within the same limits of cost as the conventional type (assuming an equal quantity for comparison) and must be equivalent in basic standards of livability and comfort, with the understanding that considerable latitude will be allowed in space arrangement and grouping. (However, bedroom sizes could not be arbitrarily reduced by assuming double deck beds, nor could laundry facilities be eliminated by assuming that laundry will be 'sent out'.) It is anticipated that lump sum bids for construction of experimental houses may be high because of the departure from conventional methods with which the contractor is familiar and it is possible that they may have to be built on a cost-plus-fixed-fee basis. However, the contractor must give assurance that there is nothing inherent in the construction methods proposed that will eliminate the possibility of getting the costs within the limits of conventional construction after he has passed the experimental stage. Naturally, it is hoped that new methods of construction may be developed that will be superior in quality but lower in price than the conventional methods.

"3. At the recent World Fairs, a number of houses were built with various kinds of unconventional materials and with new construction methods, but in most cases the purpose was to sell a certain material or a patented type of

construction. Contrary to that approach, the experiments proposed in this program are to be financed with public funds and the architect's decisions must not be motivated by any interests of a private nature.

"4. A number of experimental houses have been built in past years which received much fanfare and publicity at the time they were built, but in most instances these houses have been handled as single experimental units with no program for informing the public of their findings and for a follow up of the pros and cons of the experiment. Therefore, it is important in this program to approach the problem as scientifically as possible; to inform the public of the general nature of the program; to make a record of the reasons for using certain materials and construction methods; to report on the results of using those materials and methods as viewed from the standpoint of original cost, possibility of future cost, availability of materials on a nation-wide scale, and most important, what happens to the houses as time and weather begin to work on them and people begin to live in them.

"5. The architects shall follow and report in detail on the construction of their experimental houses and take photographs of the various stages of construction. These reports and records will be compiled with the understanding that an annual report will be made for the next ten years on the maintenance costs and general acceptability of the houses from the standpoint of livability. It is anticipated that the architect will be given free publicity in the general development of this program and in return for this publicity he must be willing to follow up his experiment for ten years at no cost to the Government other than his original fee.

"6. The Government will cooperate with the architects in every way possible and will attempt to select tenants or owners for the experimental houses who will be sympathetic to the scientific program and will be willing to cooperate in the experiment wherever possible. Too many of our present day houses are designed mainly for quick sale and the buyer discovers later that he is forced to adjust many of his desires in livability because he was originally vulnerable to too much 'eye appeal.' In this program it is hoped that the architect will design the house with constant relationship to the fourth dimension of livability.

"7. These experimental groups should be considered as small laboratories of housing with the architects as chief scientists. They will be scattered in several locations throughout the United States in order to allow for regional adaptability and should not be undertaken except on a long-time follow-up basis in order that the public shall benefit by the full value of this scientific experiment."

It is a source of real satisfaction that such a liberal far-sighted program comes from a government agency. To get the real feeling of it, compare it with the prejudiced, painfully conservative program of private interests. It is not concerned with the present emergency only, and if carried out by even a few architect-technicians, it should better the standards by contributing otherwise unobtainable material.

I presume that I was one of the first, if not the first architect to work with the U.S.H.A. under the Lanham Act, and therefore participated in doing the ground work and preparing the way for further developments. Taking the existing contracts for architectural services, existing standards, existing floor plans for the units as a basis and adjusting them to the provisions of the Lanham Act had to be done almost on the spur of the moment. While we as designers tackled the problem freely, U.S.H.A. veteran officials naturally clung to the valuable materials in their files and in the ensuing conflict both sides had to give and take. The net result was that my solution of the Bethlehem job is cramped by the old U.S.H.A. standards based really on 60 years amortization, new methods and materials taboo unless proved, et cetera. An example: dry construction, Gyplap sheathing, 15 year roofing, unconventional details were outlawed, coal as fuel was adopted, but chuting of coal was made obligatory, affecting site planning of the difficult hilly site to a degree making an economical solution almost impossible and making the existing floor plans unworkable. The way was paved, though, for clarification of the issue, and architects called in since that time find the new standards and methods much easier to deal with. I have just seen a set of plans for a 250 unit site accepted by F.W.A. with all the above mentioned obstacles removed and permitting a freedom which is fully experimental and swinging the pendulum perhaps too much the other way.

As a result of the experimental work and the work on actual projects with hemming obstacles removed I would advocate establishing new standards and standard floor plans, fitting the Lanham Act and emergency conditions. Standardized floor plans should be given to the architects before even any sketching is done.

The architect-technician will find it an all exacting task to find a fitting solution within say four weeks, even with the standard plans given to him. Let us enumerate a few of the limitations within which he has to work.

Every site offers a different problem. As a rule a community rather than a thoroughfare is desired and the site plan is worked out in correlation with existing communica-

tions, schools, churches, et cetera. Width and amount of streets, sidewalks, landscaping, public utilities, parking spaces, community center and playgrounds et cetera, all are dictated by cost limits of the Act. Coal being the fuel and chuting more economical for tenant than bag delivery, the relation of building levels to roads is a grave problem in itself on a hilly site. Depth of sewers and equalization of cut and fill are fundamentals of economic site planning and dictate grades and therefore the design. To execute working drawings and specifications which will be within, or better still below the cost limit at the first shot, requires a design using standard dimension materials to assure minimum cutting; green materials require a special design to avoid excess shrinkage; speed in erection requires prefabrication of some parts; inexperienced labor—foolproof methods of erection; due regard for materials used in other phases of defense, knowledge of markets, etc.

Pacifying local authorities and getting on with local politicians and business interests, having them accept dedicated roads (in spite of not being able to comply with local regulations and practices), and defending the project against local private interests takes tact and time. Public utilities are almost as difficult as municipalities—to find minimum and still efficient electrical, heating, and plumbing systems with available materials, acceptable to unions, fire underwriters, etc. is also a problem. Drawings and specifications must be more complete and precise in order to assure correct bids, to eliminate extras and loss of time during erection. To make accounts, to act as agent for the government, and to collect at least a part of one's money means wading through streams of red tape and is a major problem.

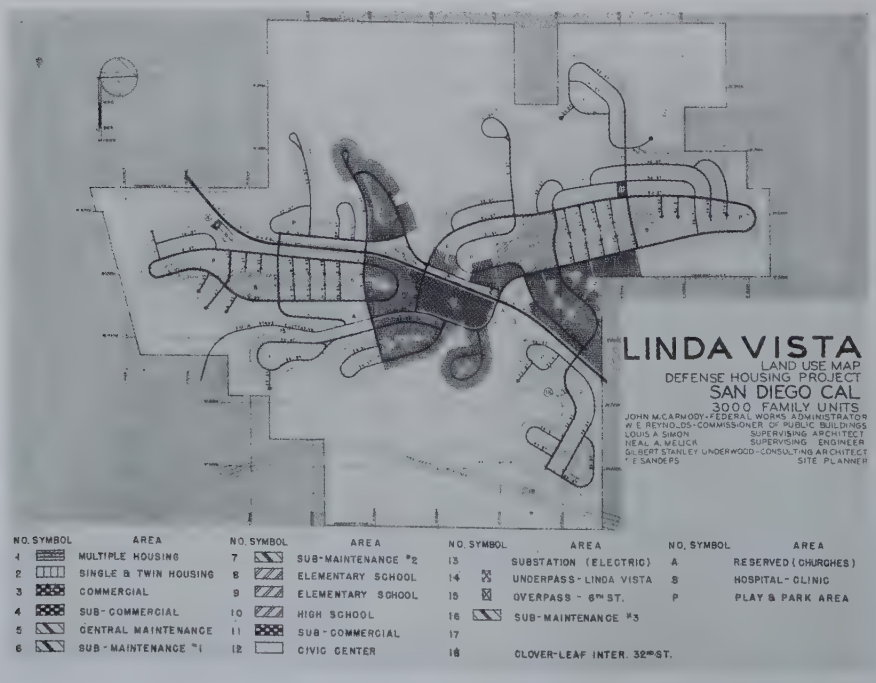
A practitioner who can perform satisfactorily these services and conserve or establish high standards is indeed a technician. To conclude, I would like to express the opinion that the limitations of the Lanham Act, coupled with intelligent administration, by eliminating waste, extravagance, and false pretentions have brought about a radical change toward better understanding of the value of simplicity and direct solutions and is a safe approach toward better design and the true art of building.

THE THIRD TYPE OF EXPERIMENTAL HOUSE DESIGNED BY ANTONIN RAYMOND IS A ONE-STORY HOUSE. IN THIS UNIT THE DESIGNER CREATED PREFABRICATED CLOSET UNITS WHICH CAN BE MOVED TO CHANGE THE SIZE OF THE BEDROOMS, OR MOVED INTO THE LIVING ROOM, MAKING THAT SIDE OF THE HOUSE THE BEDROOM. THE HOUSE IS FREESTANDING, HAS THE BATH ROOM, CLOSETS, HEATING FACILITIES CONCENTRATED IN THE MIDDLE OF IT. A ROOF MONITOR PROVIDES THE NECESSARY LIGHT AND AIR FOR THE BATHROOM

FLOOR PLAN

PBA Photos

THE SITE PLAN OF LINDA VISTA, EVOLVED BY SITE PLANNER S. E. SANDERS, IS A HIGHLY FUNCTIONAL LAY-OUT UTILIZING THE NATURAL CONTOURS TO THE GREATEST POSSIBLE DEGREE. THE NORTH-SOUTH RIDGE OF THE MESA, ON WHICH THE PROJECT IS SITUATED, IS TWO MILES LONG, WAS CHOSEN AS THE MAIN AXIS OF THE PROJECT. IN THE INSET (LOWER LEFT OF TOP PHOTOGRAPH) MAY BE SEEN THE RELATIONSHIP OF THE HOUSING DEVELOPMENT TO THE CITY OF SAN DIEGO. THE KEY MAP (INSET, UPPER LEFT) SHOWS THE POSITION OF THE COMMERCIAL AREA; COMMUNITY CENTER, HIGH SCHOOL, GRADE SCHOOLS, RESERVOIR, AND SEWAGE DISPOSAL PLANT, WITH RELATION TO THE ENTIRE PROJECT. BELOW IS THE LAND USE MAP. SYMBOLS INDICATE AREAS ASSIGNED TO THE HOUSING, ADMINISTRATIVE, AND MAINTENANCE UNITS



LINDA VISTA

AMERICA'S LARGEST DEFENSE HOUSING PROJECT

BY DONALD S. CAMERON AND GERARD T. BEECKMAN

A year ago, San Diego's housing shortage was bringing notoriety to defense housing needs. The city had been immediately affected when the defense program got underway. Its harbor, traditionally one of our principal Navy bases, was rapidly transformed into one of the busiest depots on the West Coast. At the same time, under the impetus of defense orders, aircraft manufacturing became the city's major industry. Jobs were being created faster than they could be filled.

The bulge in the city's population between the 1940 census report and the end of the year was 30,000. Lurid tales of high rents, trailer towns, and families bunking in idle street cars were carried in the press. With the reports from factory officials that men were refusing jobs for want of decent housing came the realization that the lack of substantial living quarters in San Diego was impeding an important phase of the defense program. Today, however, four government housing projects are beginning to provide over 4,500 new homes. Private builders have erected scores of others. Production for defense in San Diego is now rid of its most serious handicap. The first project to be established by the President under the Lanham Defense Housing Act—3,000 family units—remains America's largest single defense housing project. It is also the largest modern low-cost housing development in the world.

The design and construction of the project, now known as Linda Vista, were made the responsibility of the PBA.

The 3,000 family units mean homes for more than 13,000 men, women, and children, a population enough for a small city. Plans were gotten underway in Washington as soon as basic data could be shipped in from the Coast. W. E. Reynolds, Commissioner of Public Buildings, had set up a defense housing unit within PBA's Office of the Supervising Architect. Site planning was made the responsibility of S. E. Sanders, Staff City Planner. Shelter design was undertaken by C. D. Persina, Architect. Coordination of the planning was under the direction of Gilbert Stanley Underwood, Consulting Architect. Louis A. Simon was Supervising Architect, J. Stanton was Color Consultant, and E. R. A. Litzau was in charge of architectural drawings. The planning of a self-contained town naturally falls into three categories—site development, shelter design, and utility layout. An important phase of the first operation is site selection. In San Diego, PBA site agents found the choice of suitable properties limited within the artificial boundaries imposed by the "normal growth" of the city. Most of the new housing has been built southeast of the business district. Mission Canyon, one mile wide and 300 feet deep has traditionally controlled expansion to the north.

Kearney Mesa is a plateau, and the PBA purchased the 1240 acres in the southwest portion closest to the city proper. Canyons surrounding the site on the south, east, and west offer formidable obstructions to encroachments that could cause blight or interfere with the natural views which enhance the desirability of the site.

In many ways the mesa was a "natural" for a housing development. Yet its irregular terrain and canyon cuts presented a challenge to the ingenuity of the site planner. The solution evolved by Site Planner S. E. Sanders was a highly functional layout utilizing the natural contours to the greatest

possible degree. With soil less than three feet deep, skilful planning and supervision were also requisite to keep cut and fill to a minimum. The main axis of the project is the two mile long north-south ridge. Linda Vista Road, which forms the backbone for vehicular circulation, follows the ridge. Main circulatory roads penetrate into the project from Linda Vista Road. Housing areas in this central portion are supplemented by smaller outlying sections which take advantage of the land spurs that are formed by the indentations of canyons and arroyos.

In the Linda Vista plan the primary roads form super blocks. Access within the blocks varies with the type of shelter. In areas occupied by single and duplex units, secondary loops and cul-de-sac streets provide vehicular egress. In areas devoted to multiple family units, pedestrian walks provide the only means of access. This permits a complete segregation of autos and pedestrians where greater density intensifies traffic hazard probabilities.

Within all areas the site layout provides pedestrian circulation that connects housing units with schools, recreational areas, and commercial facilities, and is independent of motor circulation, made possible by the development of spacious courts within the super blocks. Ample distance betwen housing units and walks and the arrangement of plant masses eliminates any interference with the privacy of tenants.

In "spotting" the Linda Vista houses, the site planners have developed an arrangement so that each family unit may share in one or more of the views. Six family dwellings have been placed on the crest of the central ridge; four family buildings are found at the next level below. Duplexes and single family units have been placed in outlying sections. Planting plans, now completed, will provide colorful landscaping for both house and park areas at an estimated cost per unit of less than $30, including street, park and yard trees, and foundation planting. As the site was devoid of trees, except for an olive orchard covering nine acres, it is proposed to plant nearly 11,000 young trees and 60,000 shrubs and vines.

The freedom from regimentation which characterizes the site plan developed at Linda Vista is complemented by the variety in architectural faces of the shelter itself. This is partly achieved by building size. Of the 3,000 units, 1,184 are one family dwellings, 237 are duplexes, 178 are large enough to accommodate four families, and the remaining 105 units make up multiple dwellings each containing six families.

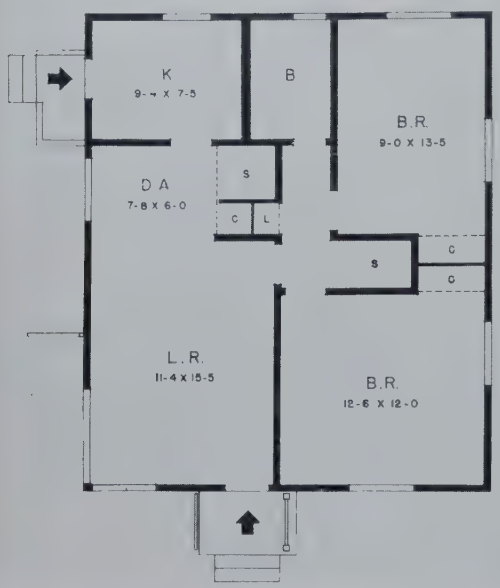
Though floor plans for each family unit are identical, variation in exterior architectural detail is effected by use of 25 different shelter designs developed by Architect C. D. Persina. Linda Vista architecture is contemporary in spirit and embodies many characteristics common to Southern California. The size of the casement window is generous because the design temperature for San Diego is 40 degrees. Sloping roofs have overhanging eaves with continuous slatted vents below. Exterior wall surfaces are stucco, or stucco and red wood siding, to give variety in color and decorative effect.

Shelter costs meet the rigid limitations set by the Lanham Act—an average of $3,000 per unit.

Flooring in all units is oak. Units are heated by gas-burning floor furnaces which produce sufficient heat for San Diego's mild climate. Tenants who wish to keep their cars under cover will be permitted to build garages on their lots for which standard designs have been originated by the project architects. Mass production, streamlined to meet a 300 day deadline, has been the main reason for the phenomenal success of the contractors in America's biggest housing project in history. To facilitate the work of the nearly 5,000 men, everything was geared to keep every crew in every trade continually supplied with the necessary materials and services. Main shops, equipped to handle more than the predetermined amount of work, were set up, included a lumber mill, plumbing shop, electric shop, sheet metal shop, tool-grinding and repair shop, mill work shop, saw mill, and an assembly shop for prefabricated forms. At the peak of production the materials, cut to size and prefabricated, were delivered to construction sites at a rate so that 30 houses a day could be completed. Smaller shop units, including hand forges and tool sharpening shops, were moved continually about the project following various stages of construction.

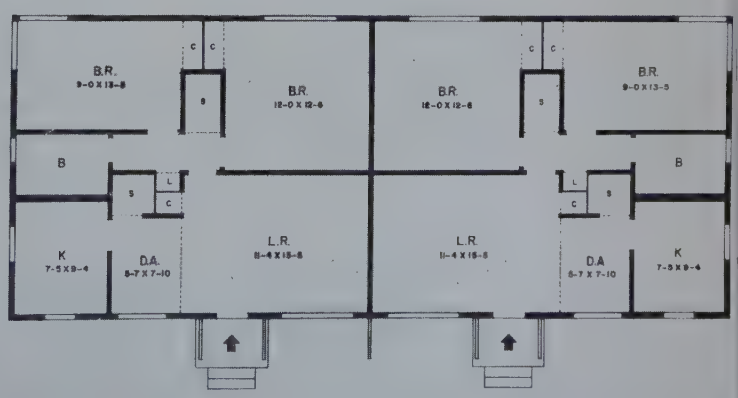
For electric current and gas, provisions were made for service from San Diego utility companies. To supply the water needs of the new community, a complete water system has been installed. From the beginning of the project, and keeping pace with all construction, has been the installation of a sewer system, which, with a modern sewerage disposal plant, will serve the needs of the new city.

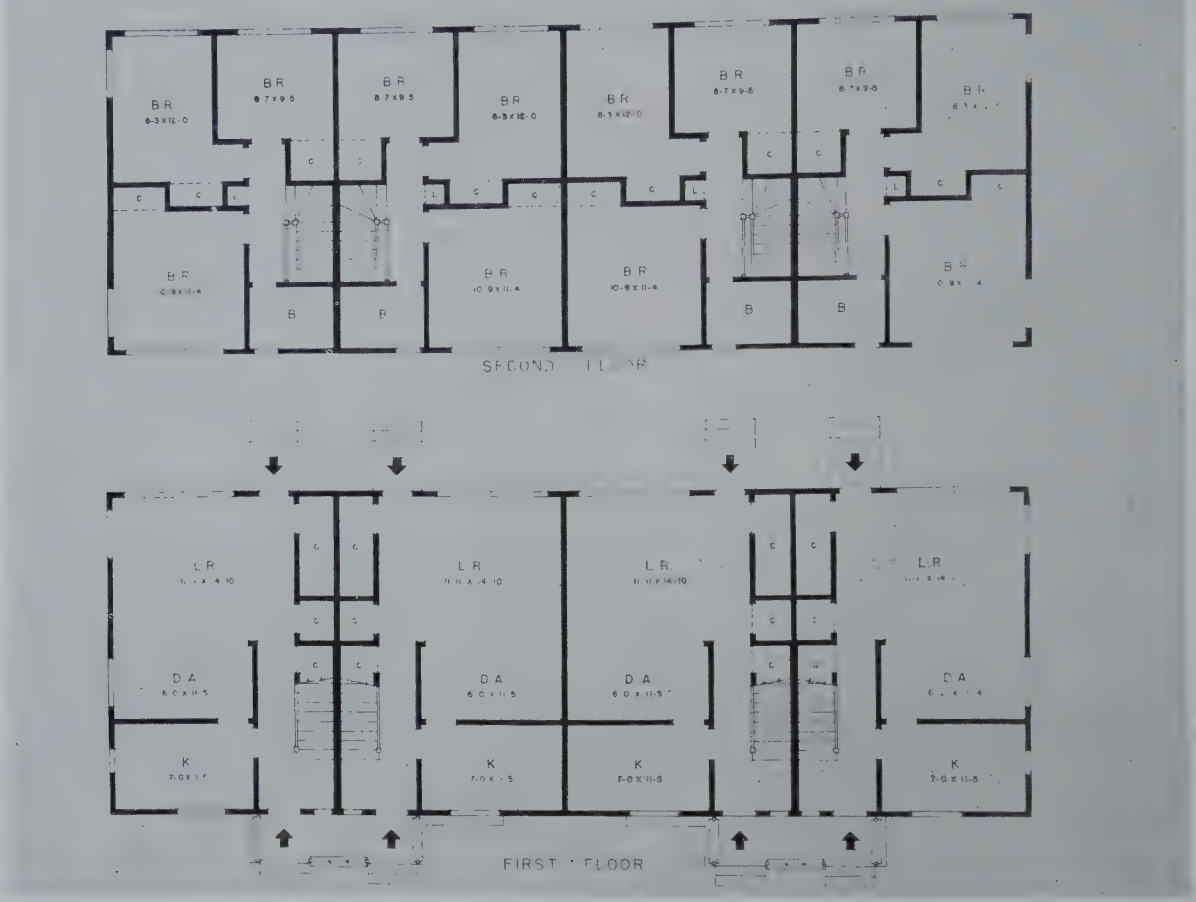
AN IDEA OF THE VASTNESS OF THE PROJECT MAY BE HAD FROM THESE TWO AERIAL PHOTOGRAPHS LOOKING SOUTH (UPPER PHOTOGRAPH) AND NORTH (LOWER PHOTOGRAPH). LARGE PARK AND PLAYGROUND AREAS WITHIN THE PROJECT WILL BRING MANY TYPES OF RECREATION WITHIN EASY DISTANCE OF EACH HOME. THE SURROUNDING CANYONS ARE TO BE MAINTAINED AND DEVELOPED TO PROVIDE PRESERVES WHERE SPORTS SUCH AS HIKING AND HORSEBACK RIDING MAY BE ENJOYED. HOUSING AREAS IN THE CENTRAL PORTION ARE SUPPLEMENTED BY SMALLER OUTLYING SECTIONS WHICH TAKE ADVANTAGE OF THE LAND SPURS THAT ARE FORMED BY THE INDENTATIONS OF CANYONS AND ARROYOS ENCIRCLING THE SITE



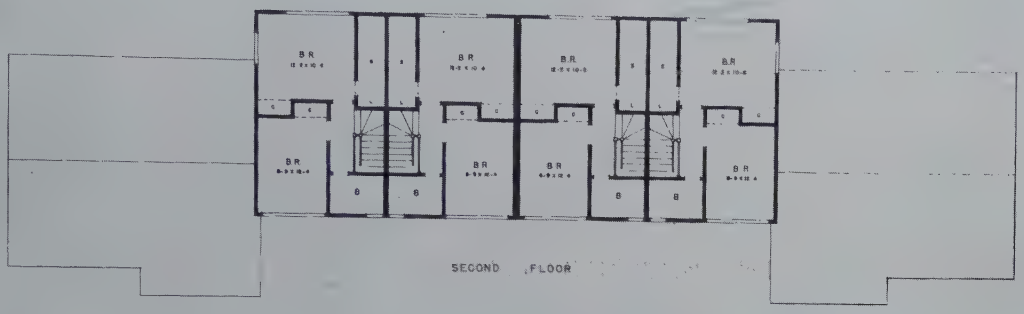
THOUGH FLOOR PLANS FOR EACH FAMILY UNIT ARE IDENTICAL, VARIATION IN EXTERIOR ARCHITECTURAL DETAIL IS EFFECTED BY USE OF 25 DIFFERENT SHELTER DESIGNS. THESE ONE-STORY, SINGLE-FAMILY DWELLING UNITS ARE ALL EVOLVED FROM THE SAME PLAN

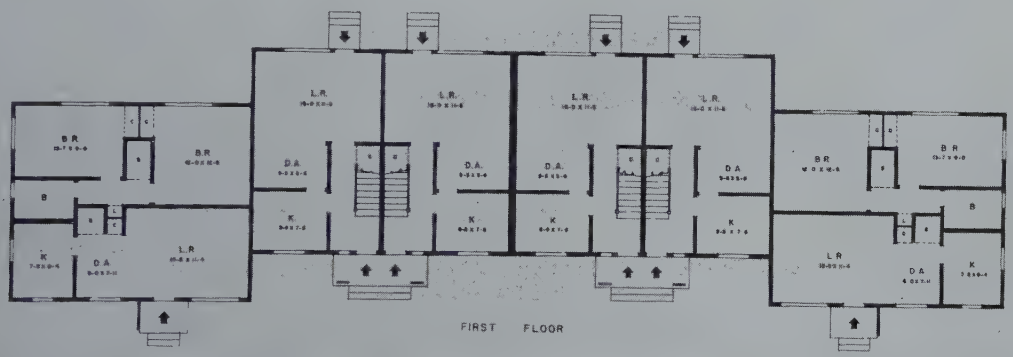
OF THE 3,000 UNITS IN THE PROJECT, 237 ARE DUPLEX HOUSES. AVOIDING THE STYLISTIC, LINDA VISTA ARCHITECTURE IS CONTEMPORARY IN SPIRIT, EMBODIES MANY SOUTHERN CALIFORNIA CHARACTERISTICS. (SKETCHES OF UNITS BY W. J. HARTGROVES)





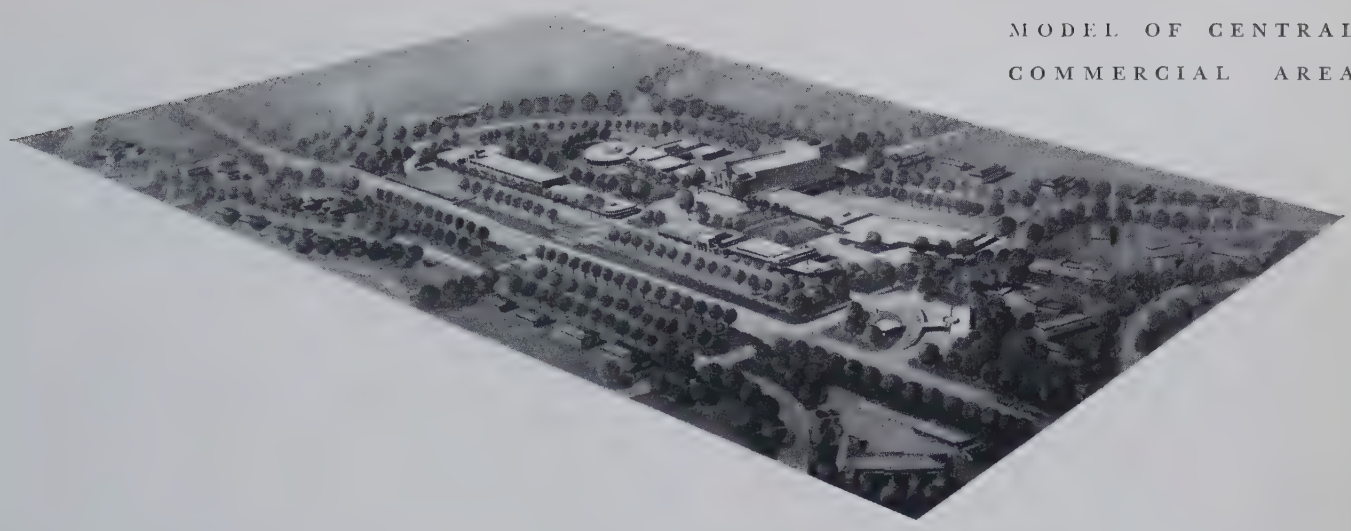
MULTIPLE DWELLINGS TAKE UP 105 UNITS, EACH CONTAINING SIX FAMILIES, WHILE 178 UNITS ARE LARGE ENOUGH TO ACCOMMODATE FOUR FAMILIES. EXTERIOR WALL SURFACES ON ALL THE UNITS ARE OF STUCCO, OR STUCCO AND RED WOOD SIDING, TO GIVE VARIETY IN COLOR AND DECORATIVE EFFECT. THE FOUR FAMILY UNITS HAVE THREE BEDROOMS, WHILE THE SIX FAMILY UNITS HAVE TWO BEDROOMS. THE LATTER





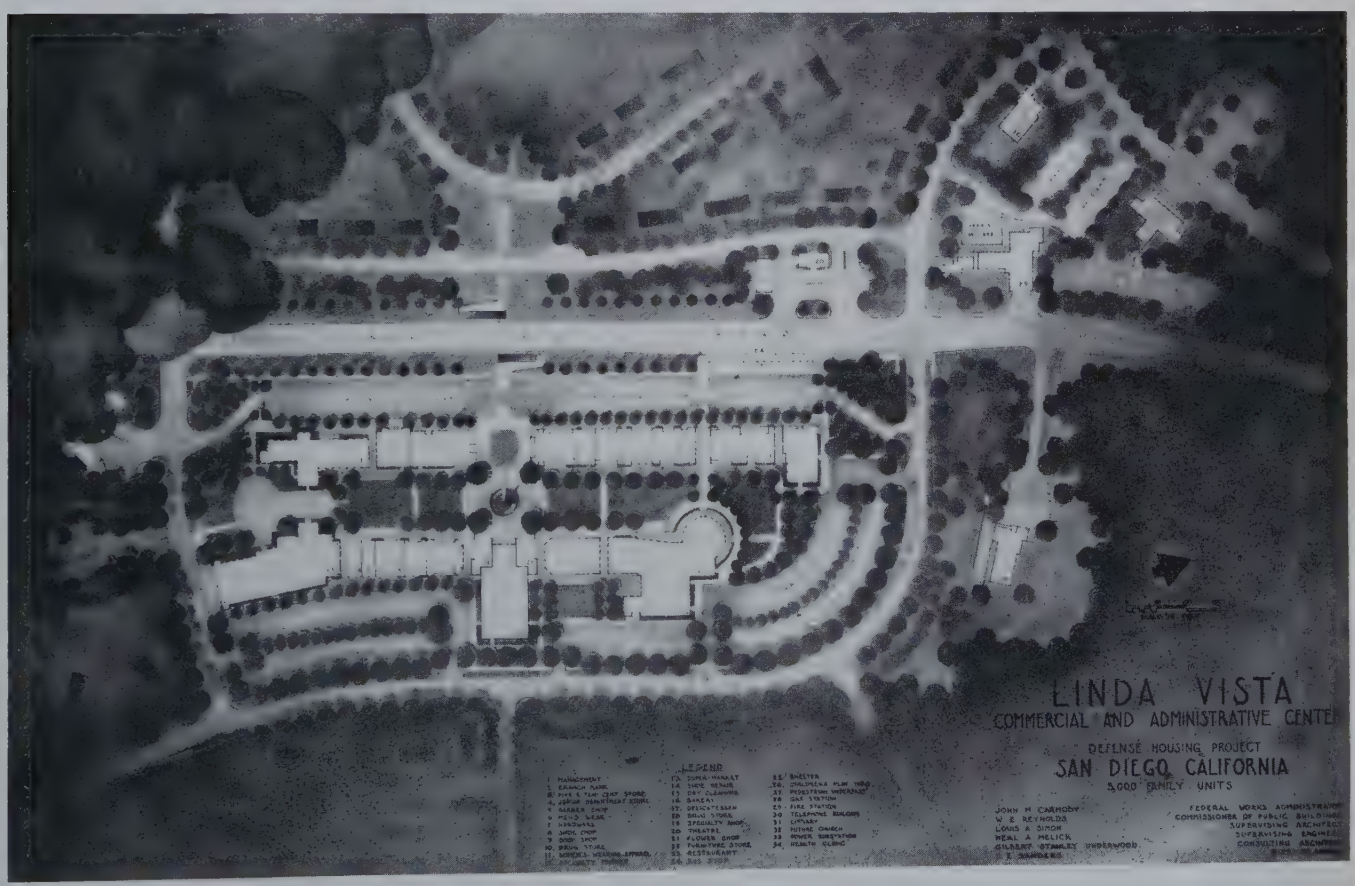
UNITS ARE MADE UP OF A TWO-STORY UNIT HOUSING FOUR FAMILIES, WITH SINGLE FAMILY, SINGLE STORY UNITS AT EITHER END OF THE TWO-STORY UNIT. EACH OF THESE HOUSES HAS ITS INDIVIDUAL LOT WHICH PROVIDES AMPLE LAWN AND GARDEN SPACE FOR ALL THE TENANTS IN THE UNIT. TENANTS HAVING CARS WILL BE PERMITTED TO BUILD GARAGES FOR WHICH STANDARD DESIGNS HAVE BEEN PROVIDED

IN "SPOTTING" HOUSES AT LINDA VISTA, THE SITE PLANNERS HAVE DEVELOPED AN ARRANGEMENT SO THAT EACH FAMILY UNIT MAY SHARE IN ONE OR MORE OF THE VIEWS. SIX FAMILY UNITS HAVE BEEN PLACED ON THE CREST OF THE CENTRAL RIDGE, FOUR FAMILY BUILDINGS ARE AT THE NEXT LEVEL BELOW. DUPLEXES AND SINGLE FAMILY DWELLINGS HAVE BEEN PLACED IN THE OUTLYING SECTIONS. PLANTING PLANS, NOW COMPLETED, WILL PROVIDE COLORFUL LANDSCAPING FOR BOTH HOUSE AND PARK AREAS. PLANTING PLANS APPROXIMATE A COST OF $30 FOR EACH UNIT. SHOWN ARE EXAMPLES OF A FOUR FAMILY UNIT (UPPER LEFT), ONE FAMILY UNIT (UPPER RIGHT), SIX FAMILY UNIT (CENTER), TWO FAMILY UNIT (BOTTOM)



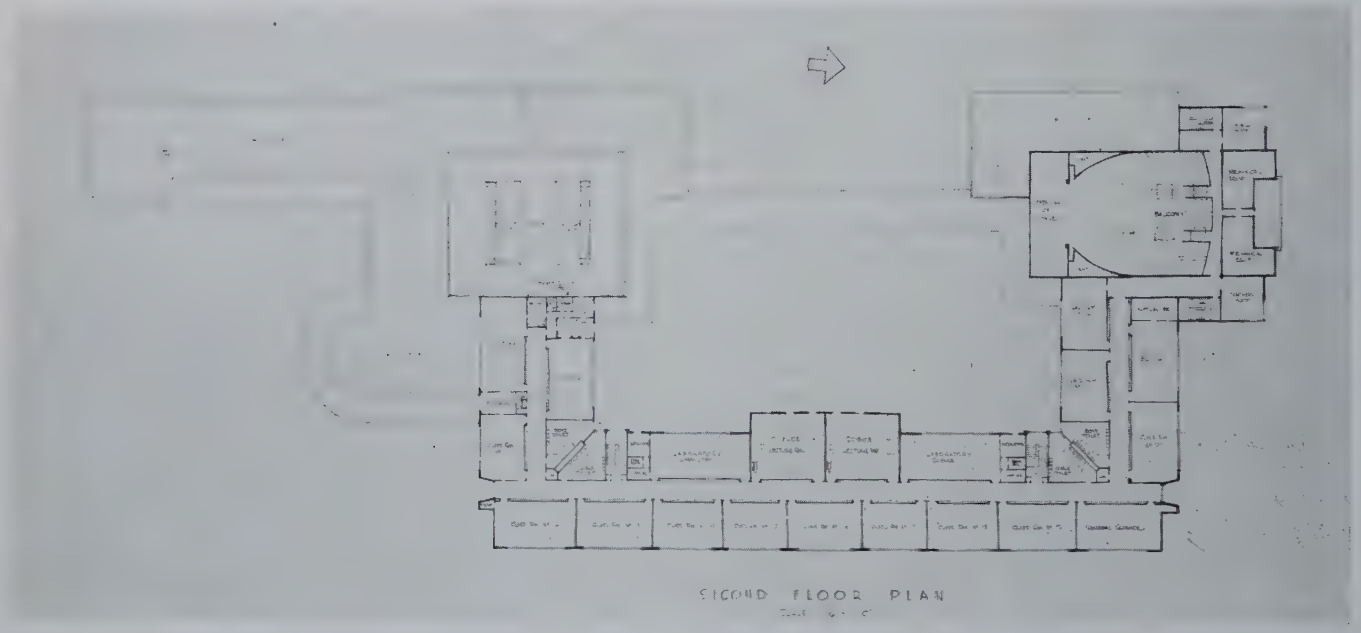
MODEL OF CENTRAL COMMERCIAL AREA

A TABULATION OF THE AREAS WAS MADE SO THAT EACH REQUIRED FACILITY COULD BE ASSIGNED A SPACE IN THE CENTRAL COMMERCIAL AREA AFTER THE DEVELOPMENT OF TENTATIVE STANDARDS. THESE STANDARDS ARE ESTIMATES BASED UPON INSPECTION OF MANY PRIVATE AND PUBLIC RESIDENTIAL COMMUNITIES AS WELL AS SURVEYS OF POSSIBLE RENTALS AND EXPECTED INCOME OF THE TENANTS. TWO SUB-CENTERS

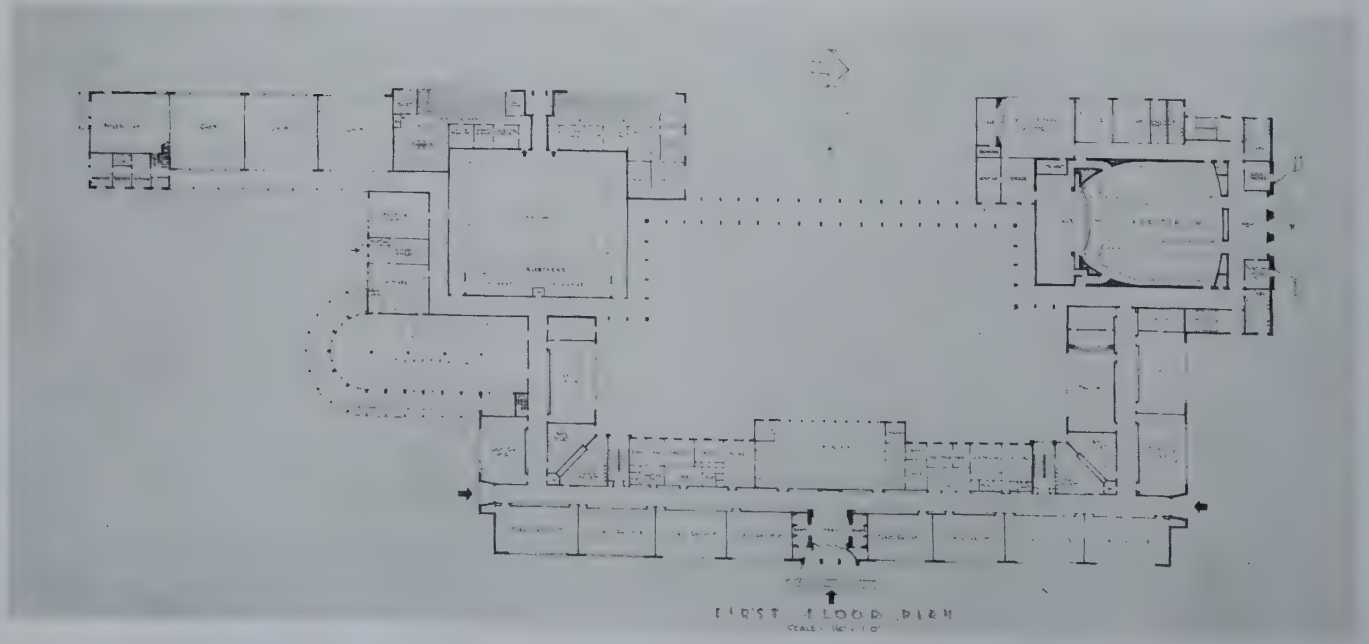


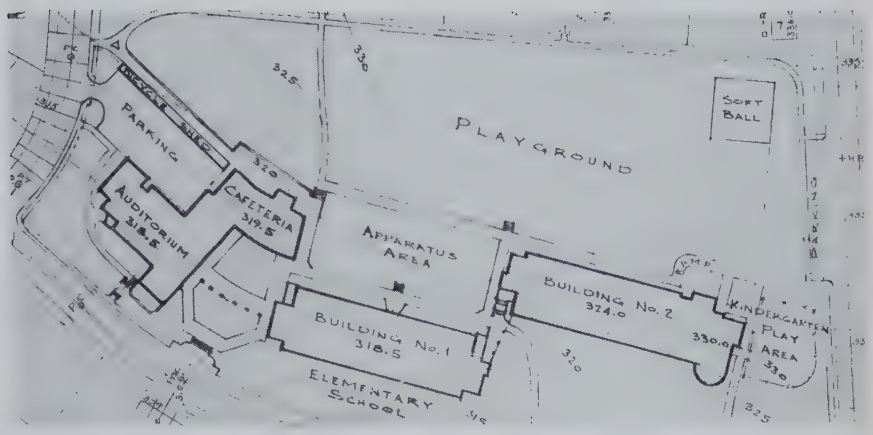
AT EITHER EXTREMITY OF THE SITE HAVE BEEN LOCATED TO SERVICE IMMEDIATE RETAIL NEEDS. A DRUG STORE AND A FOOD MARKET HAVE BEEN ASSIGNED TO EACH OF THESE SUBSIDIARY AREAS, AND APPROPRIATE PARKING AREAS PROVIDED. THREE SITES HAVE BEEN RESERVED FOR CONSTRUCTION OF CHURCHES. OTHER RETAIL UNITS PROVIDED FOR IN THE COMMERCIAL AND ADMINISTRATIVE CENTER (SITE PLAN BELOW AND ELEVATION ABOVE) INCLUDE A MOVIE THEATRE, TWO GAS STATIONS, BAKERY, HARDWARE STORE, BRANCH BANK, FOUR DENTIST'S OFFICES, SEVEN DOCTOR'S OFFICES, SIX LAWYER'S OFFICES (ALL SECOND FLOOR UNITS), TWO BEAUTY PARLORS, A POST OFFICE, BOOK STORE, FIRE HOUSE, LIBRARY, HEALTH CENTER, BARBER SHOP, FURNITURE STORE, TWO DRUG STORES, SPECIALTY MARKET, RESTAURANT, SHOE STORE, ETC.

PROVISION HAS BEEN MADE FOR THE ERECTION OF A JUNIOR-SENIOR HIGH SCHOOL AT LINDA VISTA. IT IS A TWO-STORY STRUCTURE HOUSING 22 CLASSROOMS, AN AUDITORIUM, A GYMNASIUM, CAFETERIA, LIBRARY, AND THE NECESSARY ROOMS FOR SCIENCE FACILITIES AND ADVANCED CURRICULUM STUDIES. ABOUT EIGHT HUNDRED STUDENTS WILL ATTEND THE HIGH SCHOOL, ACCORDING TO SAN DIEGO EDUCATION OFFICIALS

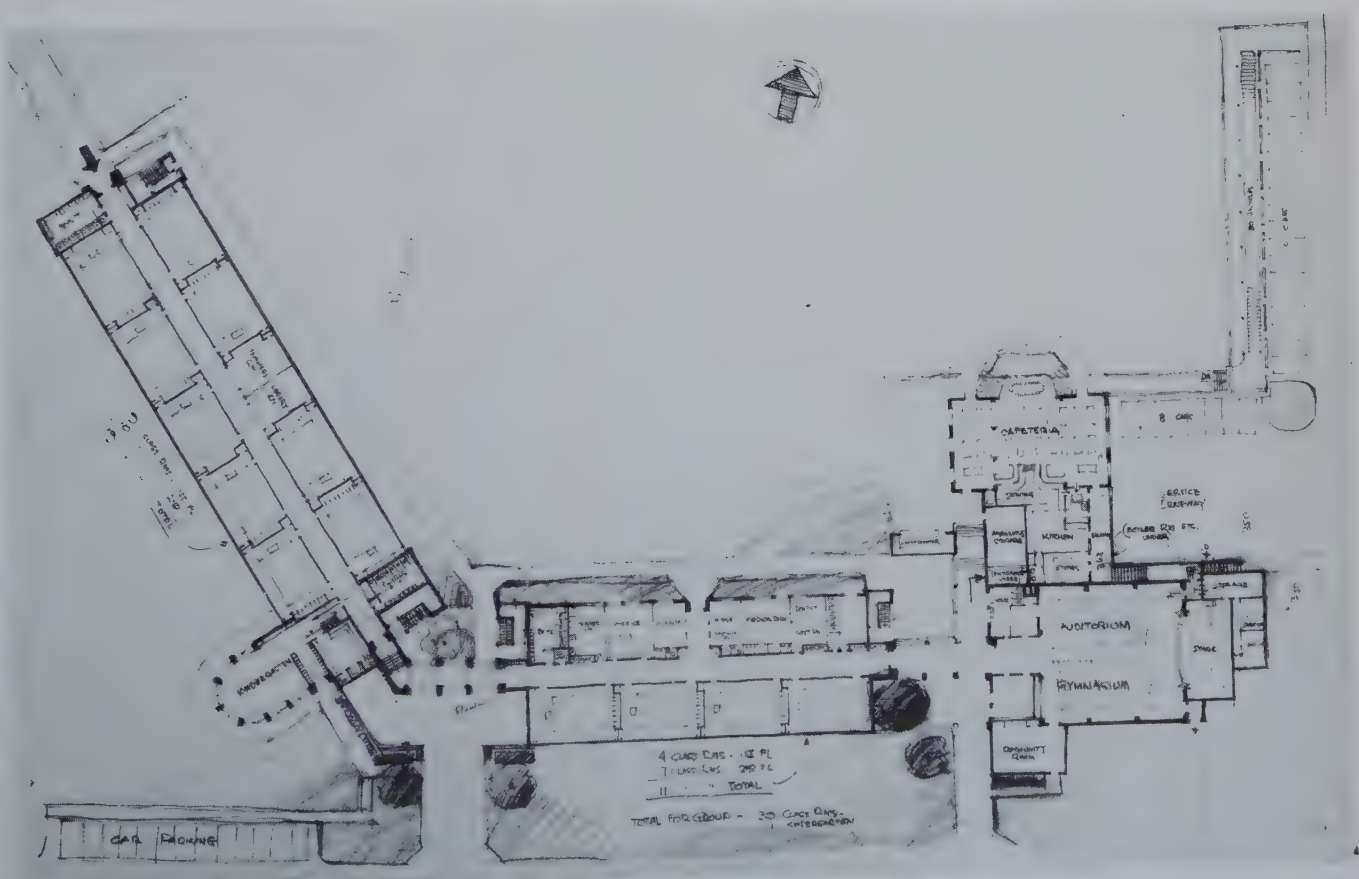


CLASSROOMS ARE HOUSED ON TWO FLOORS, TOGETHER WITH SCIENCE LABORATORIES AND SHOPS FOR NECESSARY MANUAL TRAINING AND VOCATIONAL TRAINING COURSES. TWO SCIENCE LECTURE ROOMS ARE PROVIDED

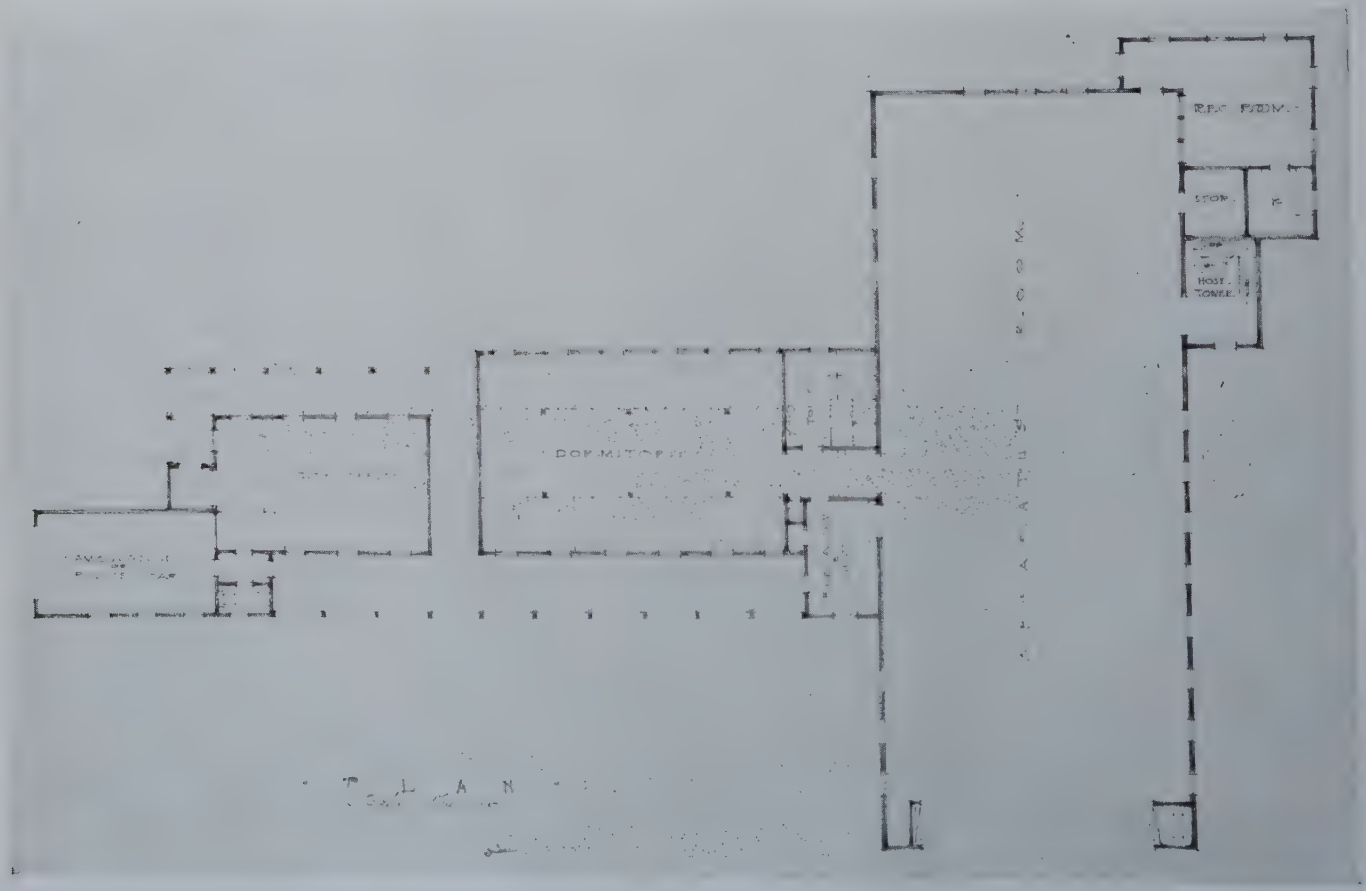




THESE DESIGNS HAVE BEEN DEVELOPED FOR TWO ELEMENTARY SCHOOLS. THE ELEVATION (CENTER) IS SUGGESTED FOR THE SCHOOL SITE (RIGHT). AT BOTTOM OF PAGE IS A FLOOR PLAN SKETCH FOR ANOTHER SCHOOL ON THE SITE. THE TWO DISTRICT SCHOOLS WILL HAVE A COMBINED TOTAL OF 56 CLASSROOMS, PLUS FACILITIES FOR SCIENCE LABORATORIES



THE POST OFFICE (LEFT) AND THE FIRE HOUSE (ELEVATION AND PLAN BELOW) ARE INTEGRAL UNITS IN THE COMMERCIAL - ADMINISTRATIVE CENTER



AIRPLANE VIEW OF FARM WORKERS COMMUNITY NEAR WOODVILLE, CALIFORNIA. SEE PLAN ON NEXT PAGE

FARM SECURITY ARCHITECTURE

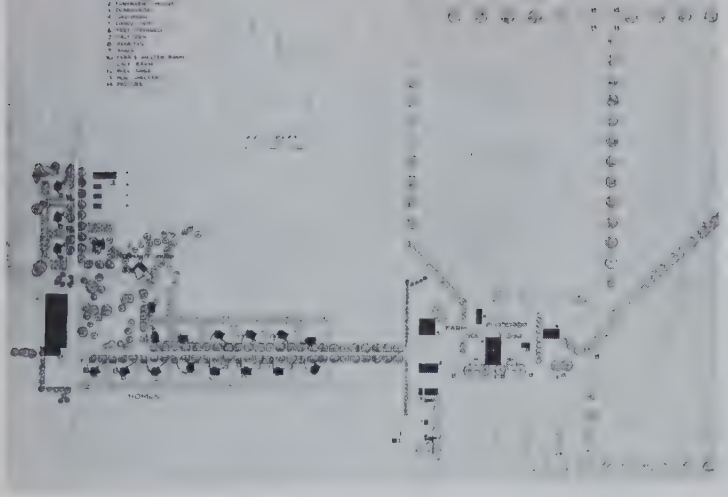
AN APPRAISAL BY TALBOT F. HAMLIN

Even before the *Grapes of Wrath* had made the Okies famous, the development of industrialized one-crop farms demanding enormous picking forces for short harvest periods had created the problems of migratory labor; drought and the forcing of small farmers off the land by the increasing development of the same type of industrialized farming increased the problems to dangerous proportions. Were these thousands and hundreds of thousands of people to become pariahs? Were they to be forced into revolutionary violence by the hardships they endured? Or could a way be devised for making them self-respecting citizens furnishing the labor necessary to an important part of our productive economy without losing their rights to a decent life?

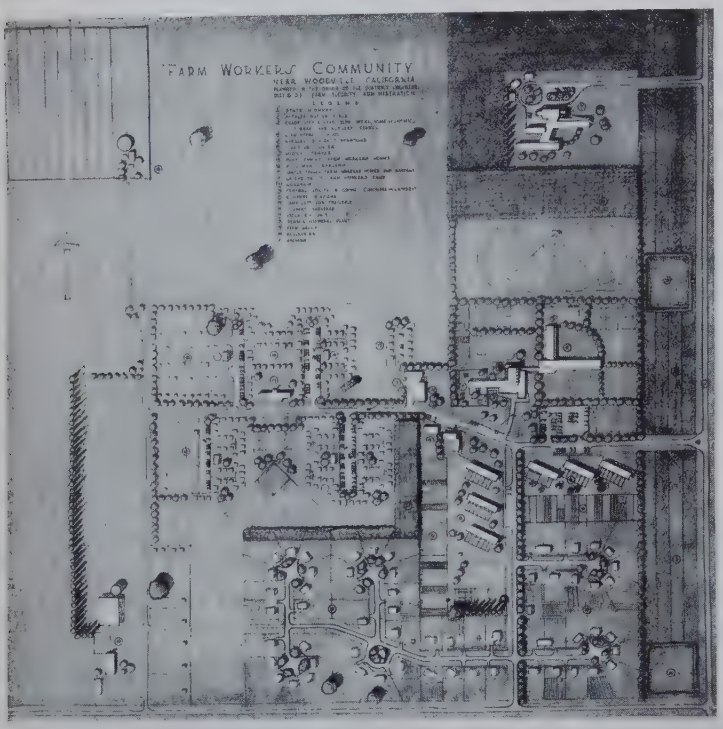
That was the question that faced the Farm Security Administration over a large part of the West and the Southwest. To it of course the answers must be carefully thought out sociologically and economically, and on these grounds they were boldly faced. The need was to build an enormous number of shelter units as cheaply as possible with due regard for sanitation and health and at least some consideration of personality development. The extraordinary achievement has been to make this effort, despite the necessary pressure of time, despite the tremendous need for unit economy, nevertheless true architecture.

The secret of this success lies in three things: first, the imaginative grasp of what a community consists of; second, the excellent study given to all buildings however modest, and the refusal in this study to be bound by stylistic prejudices or conventions; and, third, the extraordinarily creative use of building materials.

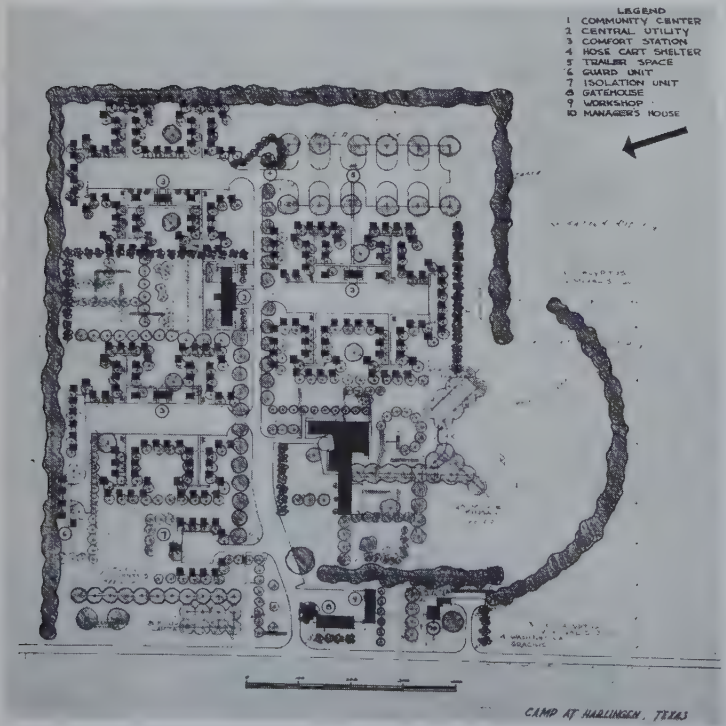
The grasp of community fundamentals led at once to the conception that what was necessary was not mere shelter but rather the creation of a new pattern of community life. In general there seemed to be a need for three different types of family shelter. One was a permanent type, such as the cooperative farms at Mineral King and Casa Grande, where migrants who were able could establish themselves anew. The second type was for semipermanent shelter where families could be housed pleasantly for considerable periods of time and eke out their cash income from temporary farm labor with subsistence farming. The third type was for transient shelter of the most inexpensive type—tent platforms or permanent shelters of almost tent type—in places where the harvest was short. In addition, for the most transient type of employment a type of mobile camp was developed in which the simplest basic facilities for the most primitive yet at the same time carefully planned community life were furnished by brilliantly designed trailers. In most centers combinations of at least two and sometimes three of the different types not only were possible but offered the greatest opportunity. In the analysis of what was necessary for such a camp the whole problem of community living had to be grasped. If the people who were to make use of these camps, were to be helped to a sounder, more healthy,



THE COOPERATIVE FARM AT MINERAL KING, CAL.



PLANS OF WOODVILLE, CAL., AND HARLINGEN, TEX.



more self-respecting life, the communities in which they were to live must be of such a type as to stimulate health, self-respect, and social responsibility. This meant that there had to be means for social meeting, for healthy recreation, and for self help of all kinds as well as a careful consideration of the health problem through the furnishing of clinics, hospitals, and isolation groups for those who were ill. It meant furnishing garden areas for the subsistence farming of the more permanent inhabitants. It meant in some places camp farm groups for the partial support of the community and its necessary permanent employees and permanent inhabitants. It meant school buildings so that the children of the migrants might have the advantage of education.

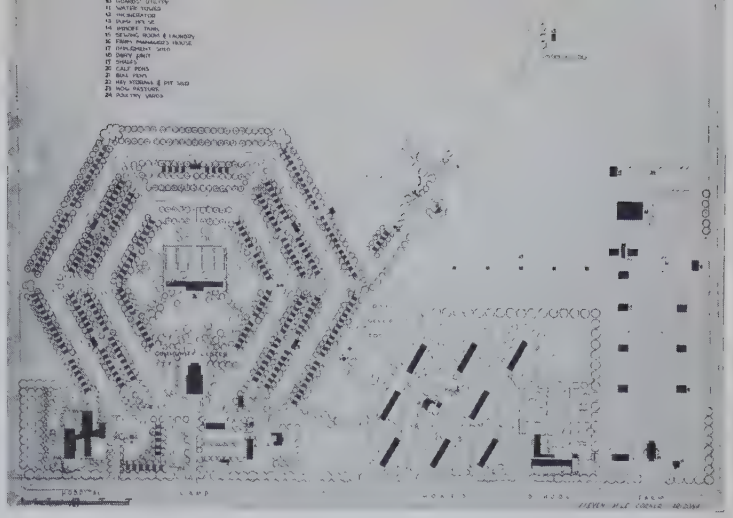
Thus what started out to be a mere matter of furnishing shelters for wandering laborers and their families became inevitably a matter of building highly developed communities with permanent populations of perhaps one hundred to two or three hundred people and temporary populations which might run over a thousand. Furthermore, these villages had to be built on inexpensive land and with the most economical materials; they were in no sense charities or doles—even though partially subsidized as under USHA, so rentals could be kept low enough to meet the needs of one of the least privileged portions of the population. The variety of type in the site plans used is an indication of the imagination of the designers, and the basic workability proves their sound grasp of the necessities. The transient housing falls into a few general classes: either shelters closely spaced around cul-de-sacs with road space sufficient to take the inevitable family car, hexagons or double hexagons that allow continuity of circulation, or in some cases row shelters bordering parking courts. The semipermanent shelters are either small single or double houses, or two-story row houses, usually for six families each and arranged to take advantage of the wind and sun in each locality. This means that they are usually placed in parallel rows, often at an angle to the general axes of the property. The single or double houses are frequently arranged on cul-de-sacs to minimize the amount of road building and give the easiest pedestrian circulation and the greatest amount of space either for allotment gardens, farming fields, or recreation facilities. The permanent shelters like those of the cooperative at Mineral King are frequently arranged along the simplest possible road

arrangement, often staggered in placing to avoid institutional appearance; sometimes cul-de-sac plans are also used.

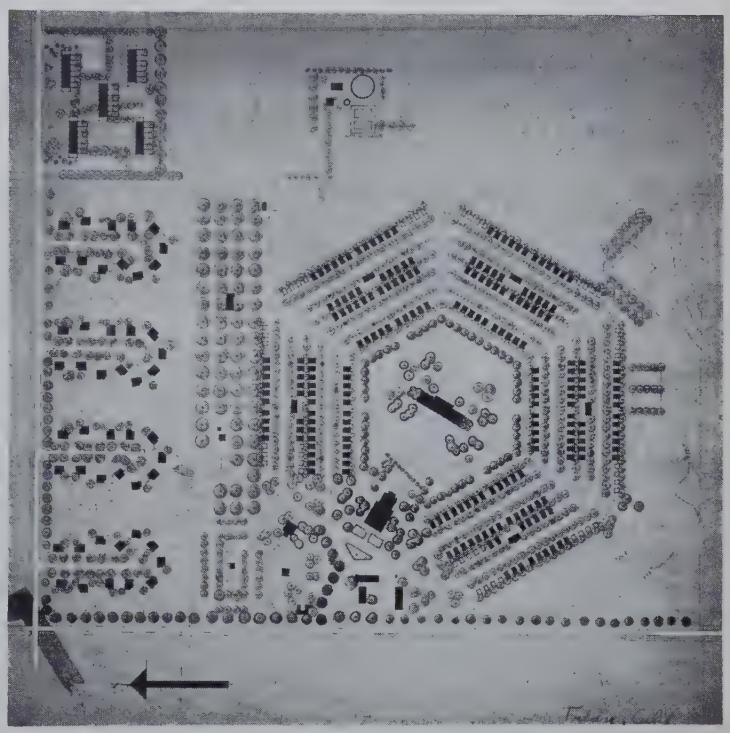
The more common camps designed for more than one type of shelter frequently combine the hexagons for transients with row houses for more permanent inhabitants. In these cases the community buildings are usually placed in an area easily accessible to both, but generally closer to the transients, for it is they who are greatest in number and have the greatest need for intensive community facilities. Rural hospitals and health or isolation groups are usually at some distance on an outlying border of the property and are almost all designed to serve as rural health centers not only for the camps themselves but also for the neighboring districts. Similarly in some cases the community center will also serve areas outside the camp. Interesting varieties of this general pattern are found at Yakima, where the hexagon for transients is replaced by a fanshaped plan and the more permanent housing is in single and double houses off cul-de-sacs; or in the formal rectangular development of Winters, where houses were placed in an existing orchard for shade, and limited terrain means formal arrangement; or at Eleven Mile Corner, a closely organized group with the rows of six-family houses paralleling one side of the hexagon. Another group most interesting in its circulation is that at Yuba City; nowhere else can the skill of the site plans, the ability to produce not only a workable circulation but also attractive variety, be better realized than in the curving road and turnaround that serves the group of parallel six-family rows.

In all of this site planning the problem has been seen as a human and an aesthetic problem as well as a problem in serving practical ends. Thus the most careful use has been made of existing trees, and where definite groves or stands of timber exist on the property these areas have been chosen wherever possible for the community buildings, the schools, and the more permanent houses, so that the migrant driving in dusty after a day's work in blazing shadeless fields or a long run over sunbeaten and windswept highways may find his relaxation in a place dappled with leaf shadows, embowered with trees and with the heartening feel of green and growing things around. Moreover, tree planting and a certain amount of modest landscaping has formed an essential part of all the communities.

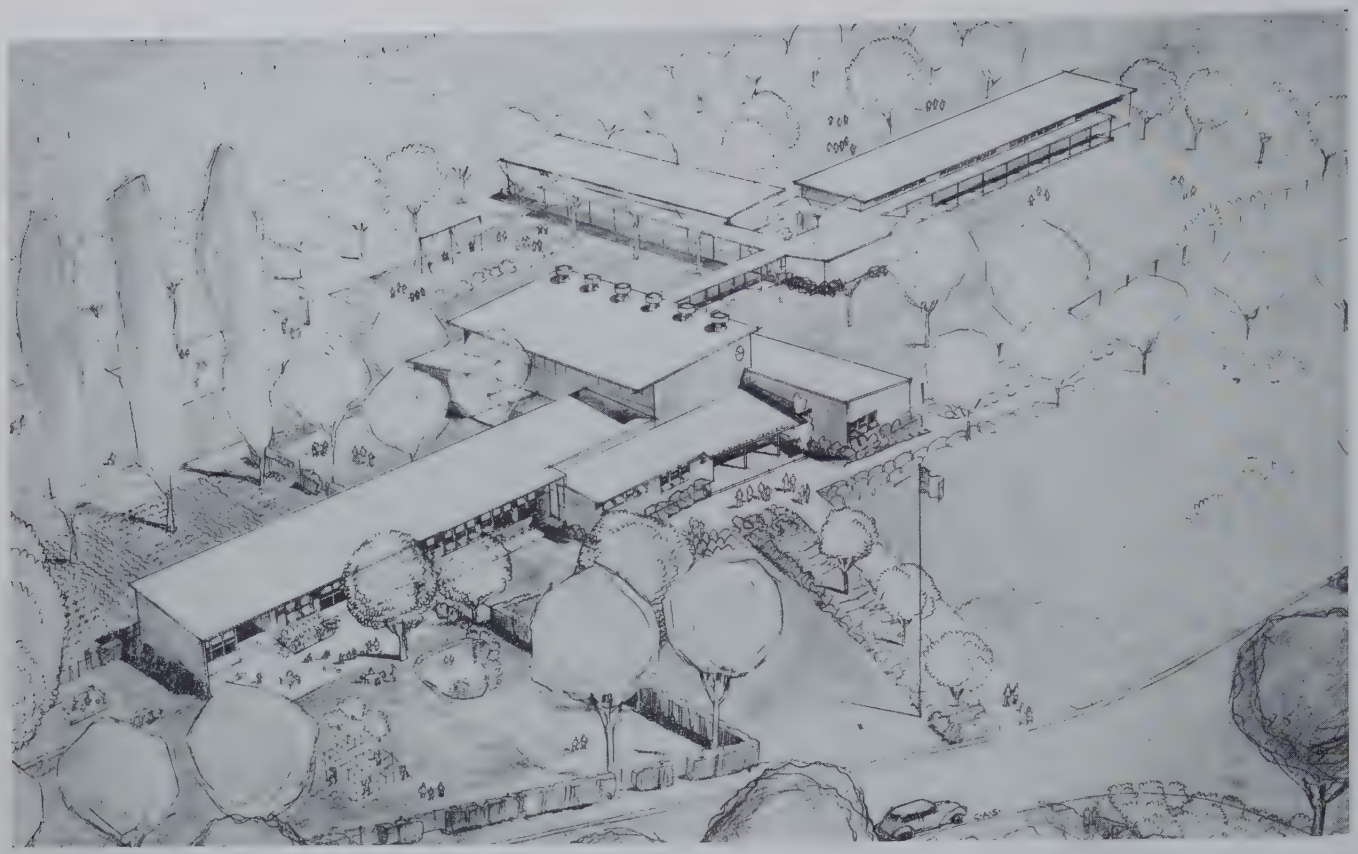
The same imagination can be seen in the community buildings, which vary in size



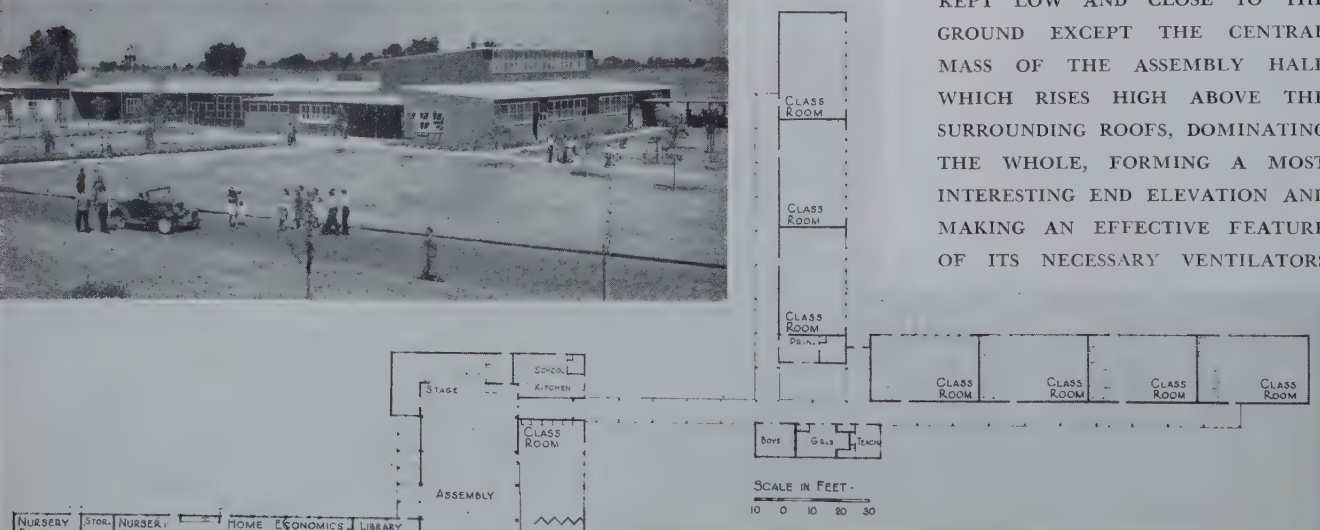
F.S.A. COMMUNITY, ELEVEN MILE CORNER, ARIZ.



PLAN AND AIR VIEW OF TULARE, F.S.A. PROJECT



IN THE COMMUNITY BUILDING AT WOODVILLE, CALIFORNIA, ALL IS KEPT LOW AND CLOSE TO THE GROUND EXCEPT THE CENTRAL MASS OF THE ASSEMBLY HALL WHICH RISES HIGH ABOVE THE SURROUNDING ROOFS, DOMINATING THE WHOLE, FORMING A MOST INTERESTING END ELEVATION AND MAKING AN EFFECTIVE FEATURE OF ITS NECESSARY VENTILATORS



THE ENTIRE GROUP FORMS A CHARMING AND ATTRACTIVE CULTURAL CIVIC CENTER AT LOW COST. ENCLOSED CORRIDORS ARE MINIMIZED AND WHEREVER POSSIBLE EXTERIOR COVERED WAYS TAKE THEIR PLACE. THE BUILDING, INTERESTING AS IT IS IN ITS MASS RELATIONSHIP, IS CHIEFLY A MATTER OF COVERING STANDARD SPANS WITH SINGLE SLOPE OR FLAT ROOFS

from the simple single hall to large structures with separate rooms for a library, for home economics, and for classes or clubs. At Westley one has the problem reduced to its simplest terms—a hall that can be used for meetings, for classes, or for a living-room, flanked on each side by smaller spaces for toilets and kitchens and in front by a raised porch that can serve as a stage for outdoor meetings.

Somewhat larger are a series of L-shaped buildings containing a meeting hall in one wing and laundry facilities or a store in the other, for use by the tenants of the more permanent housing and furnished as a sort of secondary community center in addition to the larger central facilities. These little L-shaped buildings have been constructed of wood as in Yuba City, or adobe as in Chandler, and the way these materials are allowed to influence the design is an excellent example of integration of form and construction. In Yuba City the building is sheathed partly with vertical siding and partly with horizontal clapboards, and the windows are closely grouped in long bands as the rhythm of the wood framing suggests. In Casa Grande on the other hand everything is done to emphasize that continuity of wall which the adobe construction suggests, and the windows are large and simple but widely spaced. Especially interesting are the grilles that ventilate the Coop. Store. That same quality of making interesting masses out of simple, excellently constructed forms controls the larger community centers like those of Woodville and Granger. In both the assembly hall is flanked by classrooms on one side; sliding doors permit the classroom area to be added to the assembly area, and folding partitions allow the classroom space to be subdivided or thrown together.

At Granger there is also a health wing with examination and treatment rooms as well as a clinic office and waiting-room; in other projects the clinic is a separate building in connection with the rural health center. There are special play terrace spaces opening from the nursery schoolrooms, and a broad projecting roof gives shelter from rain and sun. At Woodville this community center is linked by a covered way to a seven-classroom school, so that the assembly room can be used as the school gymnasium. Thus one group attractive in its basic proportions and direct in its relationships furnishes flexibly arranged covered areas for child instruction, adult instruction, recreation, and social gatherings, adjustable to almost any use.

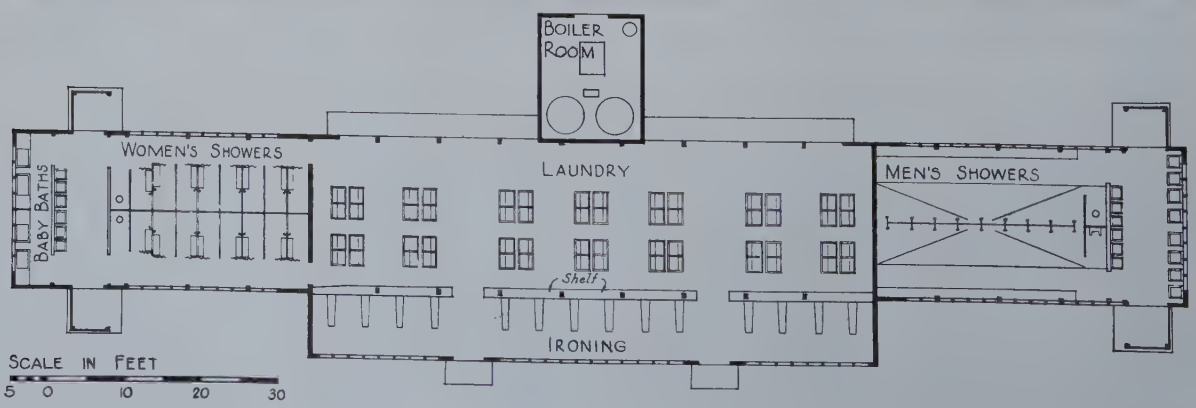
WOODVILLE, EXTERIOR AT NURSERY SCHOOL ROOM

INTERIOR OF ASSEMBLY HALL FACING STAGE

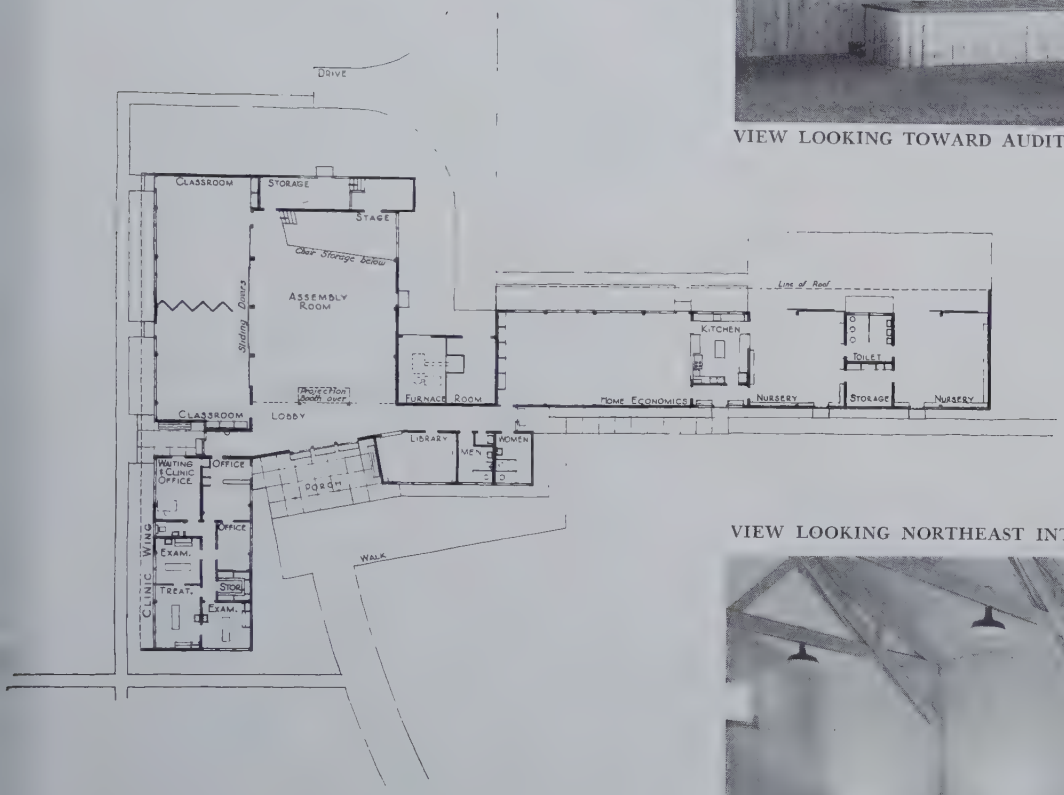
COVERED WAY, AND (BELOW) EXTERIOR DETAIL

Even the utilities buildings have the same quality of direct imaginative design. The laundry area is usually open to the air on one side at least, with ventilation still further guaranteed by interesting ridge ventilators. The shower rooms are simply placed on either side, and a boiler and water heater room is usually placed in a central position on one side of the laundry. Plumbing is thereby reduced to a minimum, and the long low lines and repeated openings of these buildings—such as those at Yuba City and Woodville—give them excellent character. Even the toilet buildings for the transient centers have the same kind of imaginative design. Nothing has been slurred over, no opportunity for interest forgotten. Thus the interesting louvered ventilator grilles which, combined with the ridge openings, insure perfect natural ventilation are made into an attractive element on the front, and the little screens that give privacy to the entrance doors make interesting end accents.

THE TWO SMALL ADOBE COMMUNITY BUILDINGS AT CHANDLER AND CASA GRANDE, SHOWN ABOVE, ARE SIMPLY AND CHARMINGLY HANDLED. EACH CONTAINS A MEETING HALL AND A LAUNDRY OR COOPERATIVE STORE FOR THE TENANTS OF THE MORE PERMANENT HOUSING. BELOW IS THE UTILITIES BUILDING AT WOODVILLE, CALIFORNIA, WITH ITS INTERESTING USE OF VENTILATING LOUVERS AS AN IMPORTANT ELEMENT OF DESIGN. SEE THE SECTION AT THE TOP OF PAGE 716 FOR CONSTRUCTION DETAILS



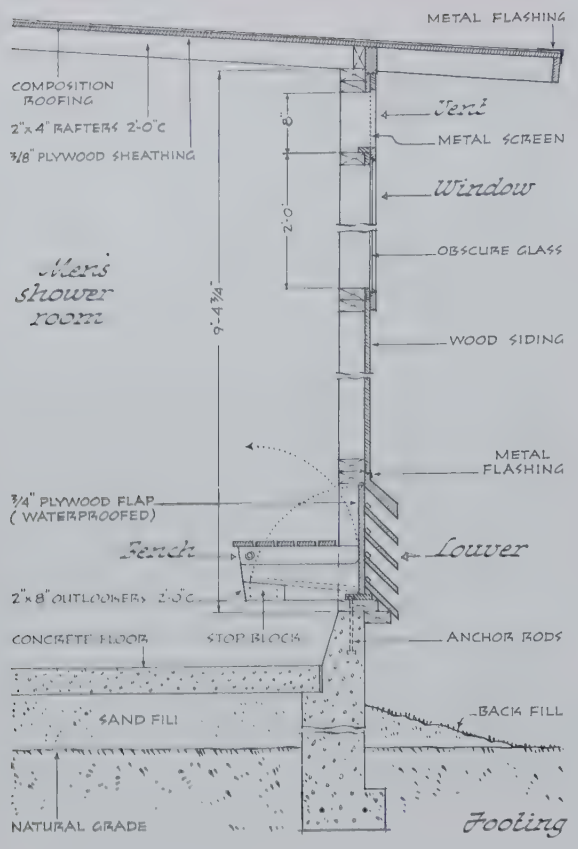
VIEW LOOKING TOWARD AUDITORIUM STAGE



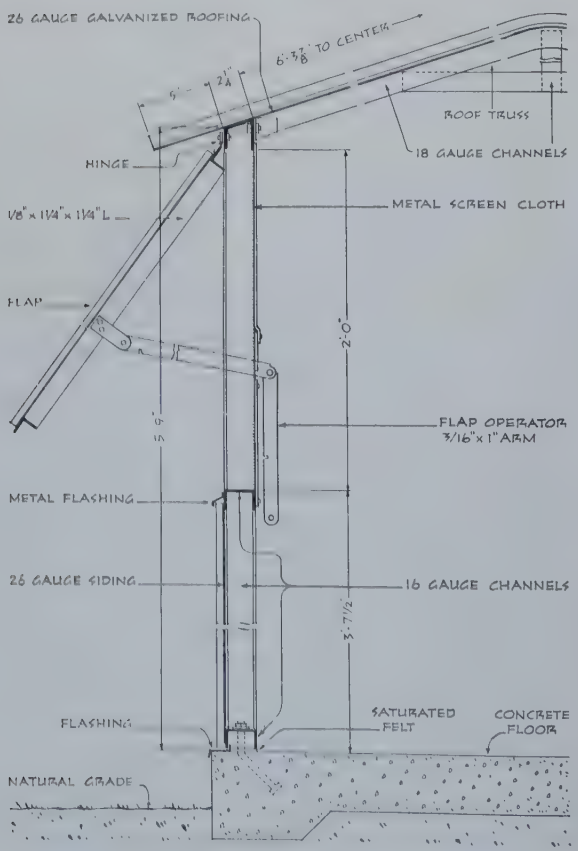
VIEW LOOKING NORTHEAST INTO CLASSROOMS

AT GRANGER, WASHINGTON, THE F.S.A. COMMUNITY CENTER BUILDING HAS, LIKE THAT OF WOODVILLE, AN ASSEMBLY HALL FLANKED BY CLASSROOMS ON ONE SIDE WHICH MAY BE ADDED TO THE ASSEMBLY AREA WHEN NEEDED. THE CLASSROOM SPACE ITSELF IS EQUIPPED WITH AN ACCORDION-TYPE PARTITION. BELOW IS A VIEW INSIDE THE MAIN AUDITORIUM ENTRANCE WITH PROJECTION BOOTH

CLASSROOM WITH ITS DIVIDING PARTITION



F.S.A. CONSTRUCTION DETAILS SHOW INVENTIVENESS. ABOVE IS A WALL SECTION FROM THE UTILITY BUILDING AT WOODVILLE. BELOW A DETAIL OF THE METAL SHELTERS USED AT WOODVILLE AND ELSEWHERE, AS SHOWN OPPOSITE



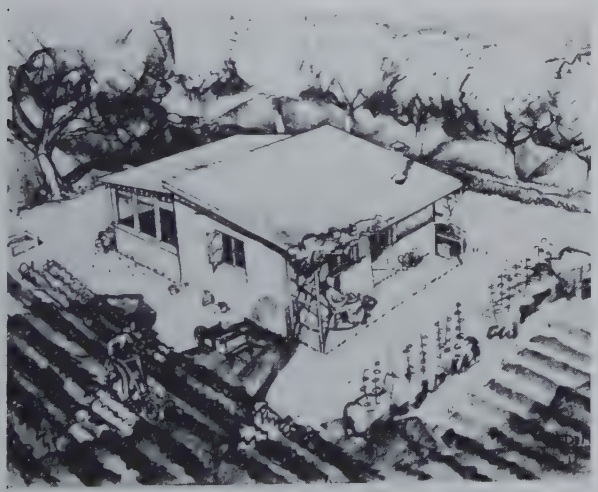
It is in the variety and character of house types that the originality and independence of the designers is perhaps best shown. Even the tent-type shelters of metal have been considered a subject for study as worthy as any of the larger buildings.

The same qualities are found in the more permanent shelters, the effort always being to provide the greatest flexibility of use and the greatest real privacy with the least possible building of partitions and special finish. The little houses at Arvin are typical. Essentially they consist of but one room with a sleeping porch behind it. In the corner of the main room, a bath with a toilet and shower is partitioned off; the remaining end of the room serves as a kitchen. Two cabinets in the sleeping porch divide it into two areas each large enough for a double bed, with a single bed in the living-room; this gives adequate sleeping and living accommodation for five people in the most economical manner. Human quality is derived by projecting the roof of the house toward the front over a covered terrace with simple lattices at the end, and the composition made interesting by sloping the roof over the porch and that over the main portion of the building in two directions. Thus out of what is essentially an absolutely minimum family shelter a little house of considerable charm is produced, well ventilated, furnished with all necessities, yet at low cost.

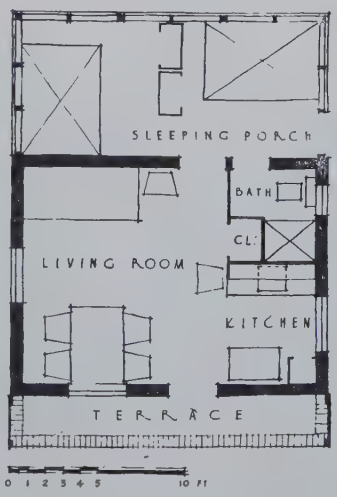
The garden houses at Woodville are slightly larger. Here flaps on the sunny ends replace windows and not only allow more efficient shade and ventilation but also guarantee privacy and add to the architectural interest. Of the larger individual houses the most interesting to me are the bungalows at Mineral King, with their attached car shelters, and the long low adobe houses at Chandler. Another excellent type is found in the little houses of Glendale, Arizona, with their ridge ventilators, their vine-grown entrance porches, and the concentrated adobe wall surfaces.

The creative approach is shown especially well in the two-story row houses found in so many of the larger developments. The buildings are laid out in 16-foot units. The stair with a storage closet beneath it leads directly from the living-room. Back of the stair the kitchen equipment is grouped against the wall but separated from the living-dining space only by a thin screen at one end, so that the entire space of the first floor counts as one and the apartment seems much bigger than it is. The stair comes up to a little hall on the second floor just large

THE TENT-LIKE METAL SHELTERS DEVELOPED BY THE F.S.A. DESIGNERS FOR TRANSIENT POPULATION AND USED AT A NUMBER OF CAMPS HAVE BEEN CAREFULLY STUDIED. THEY CONTAIN A SINGLE ROOM, WELL-VENTILATED, WITH NO SACRIFICE OF PRIVACY. A PORCH AT THE FRONT, EQUIPPED WITH SHELVES, GIVES PROTECTED WORK SPACE. THE SECTION AT THE BOTTOM OF THE FACING PAGE SHOWS THEIR CONSTRUCTION. FOR THE MORE PERMANENT MEMBERS OF THE COMMUNITIES LITTLE HOUSES OF A VARIETY OF TYPES HAVE BEEN DEVELOPED. THOSE SHOWN BELOW ARE TYPICAL OF THE SIMPLE, DIRECT HANDLING



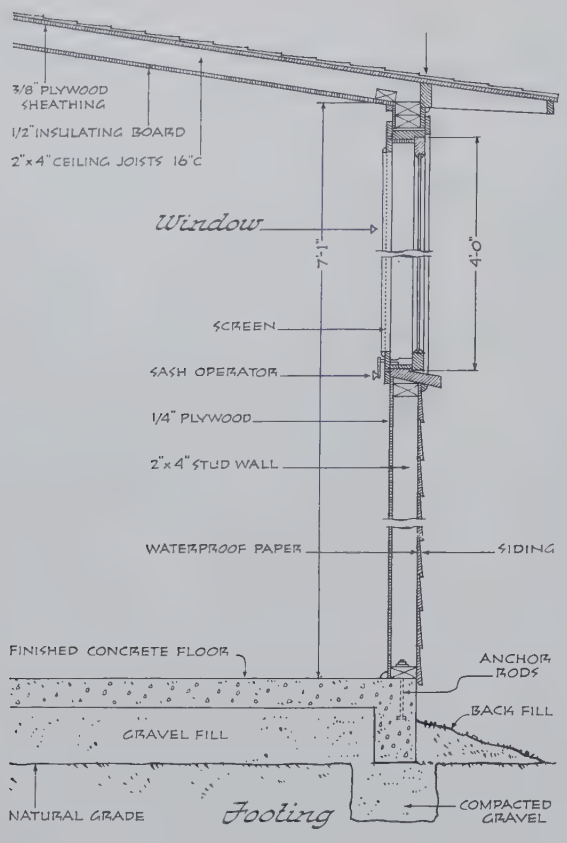
HOUSE AT ARVIN



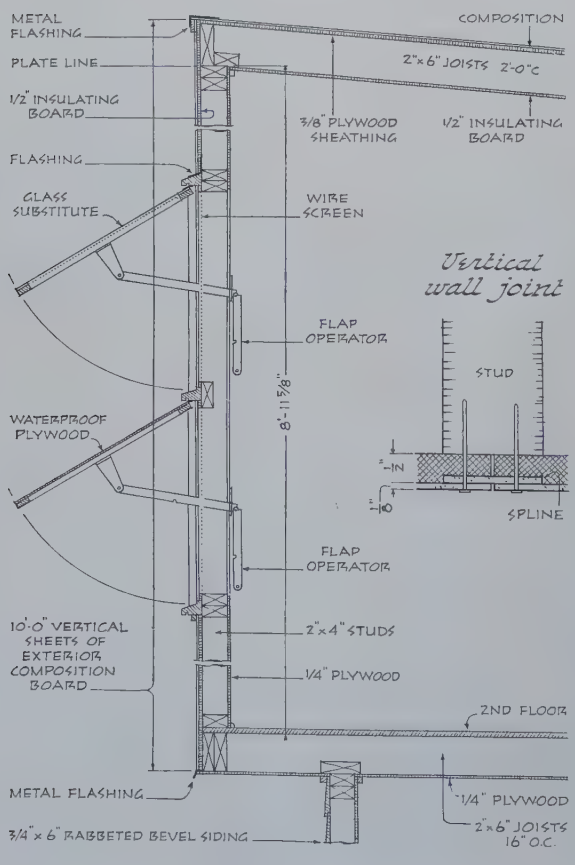
ARVIN HOUSE

COMMUNITY BUILDING, GLENDALE

GARDEN HOUSES, WOODVILLE



ABOVE, SECTION OF FARM LABOR HOME AT WOODVILLE, AND BELOW, DETAIL SHOWING TREATMENT OF MULTI-FAMILY ROW HOUSES AT YUBA CITY AND ELSEWHERE AS ILLUSTRATED OPPOSITE

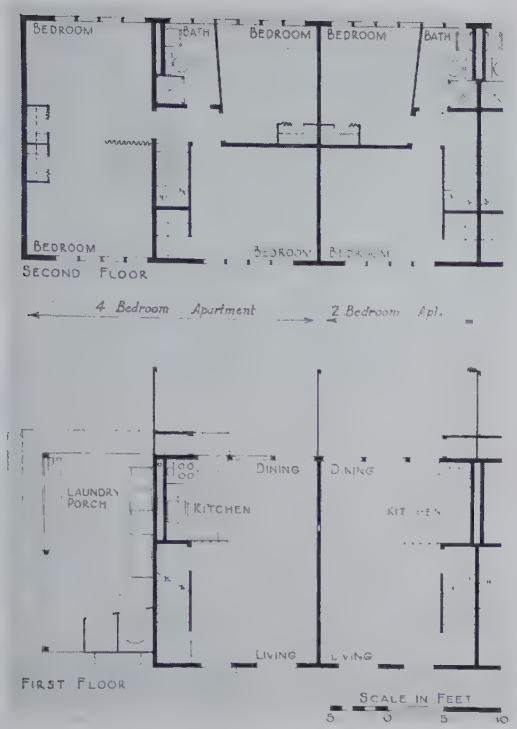


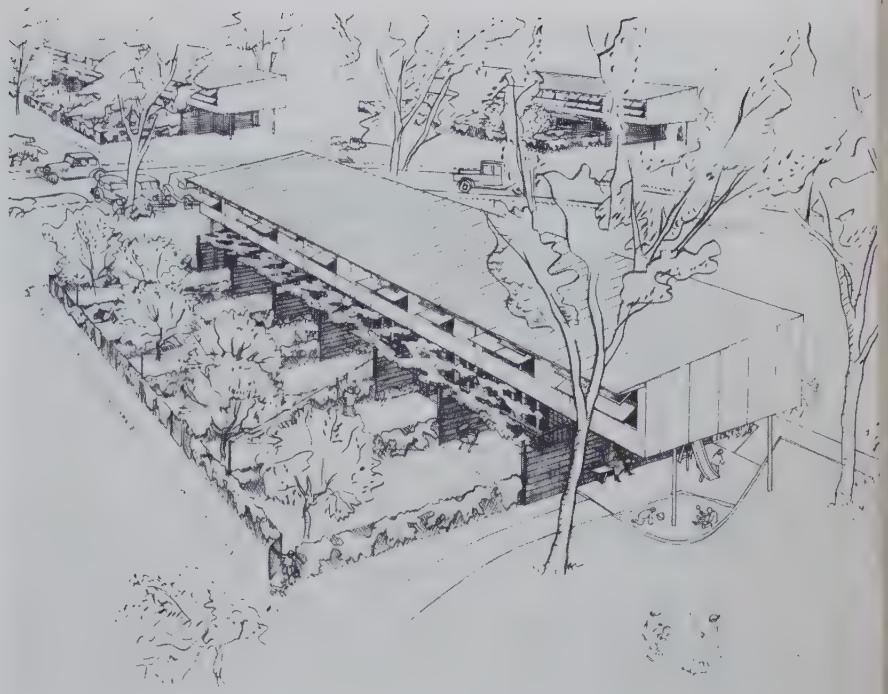
enough for the doors into the bedrooms and the bath. Each bedroom has a closet, small but sufficient for the clothes such families as are likely to use the house will have.

In each row the upper floor projects at the ends one whole unit beyond the lower floor, the projection being held up on the simplest of columns; the open space thus gained is used as a laundry porch at one end and a children's play porch at the other, and the area above it forms a dormitory that can be divided by a curtain into two bedrooms; space is thus allowed for two unusually large families in each of the rows. The upper floor is also wider than the lower floor, and its projection forms a shelter over the kitchen door and the living-room windows adjacent. This, combined with screened walls running out toward the back yard, makes an additional, quite private, outdoor living space for each family.

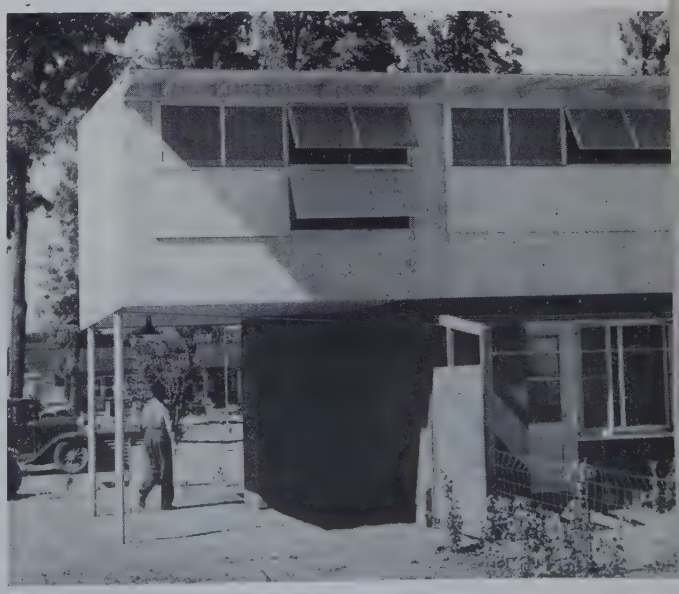
The same quality of independent thinking is found in the exterior and interior treatment. In Chandler, Arizona, the units are separated by heavy cross walls of adobe forming a strong rhythmical pattern. In the other row houses the construction is of frame of the simplest type, covered with stained redwood siding beneath and wallboard above. The long horizontals created by this treatment, combined with the interesting manner in which the rows are arranged, give to these portions of the communities an effect of great variety, harmony, and loveliness. The kitchen equipment is of the simplest, and everywhere there is a sense of such careful arrangement and such basically pleasant proportions that the total effect is one of marked attractiveness; even the diagonal underflooring of the second floor, which shows unashamedly, takes its part in the entire composition.

The details of the actual construction of all these buildings are extraordinarily interesting because they show how the need for economy, creatively conceived, can itself become a means to new and beautiful architectural forms. Apparently the San Francisco Architectural Office of the F.S.A. approached every problem of architectural design, in big as in little ways, with complete freshness and innocence of mind. It had no fixed ideas as to windows or doors or interiors or exteriors. Nothing seems to have inhibited its logical approach to each problem; no foreordained picture of what had been done or what was usual held it back. Where conventional methods and forms seemed logical they were used, as for instance in many of the smaller farm-labor





THE TWO-STORY MULTI-FAMILY DWELLINGS USED IN A NUMBER OF F.S.A. COMMUNITIES FOLLOW THE SCHEME INDICATED BY THE PLAN AND PERSPECTIVE SKETCH ABOVE. EACH ROW CONTAINS FOUR TWO-BEDROOM UNITS AND TWO FOUR-BEDROOM UNITS. TYPE OF CONSTRUCTION VARIES FROM ADOBE, AS AT CHANDLER, ARIZONA, TO WOOD AND COMPOSITION BOARD, AS AT YUBA CITY AND ELSEWHERE



EVEN TOILET BUILDINGS FOR TRANSIENTS SHOW DESIGNERS' IMAGINATIVE USE OF NECESSARY ELEMENTS

homes where ordinary stud construction was used with bevel siding over waterproof paper in a quite normal way, the only new element being perhaps the use of ⅜-inch plywood as a roof sheathing (a material used almost constantly for this purpose through this work) and also the use of plywood as an interior finish. Interesting is the fact that a finished concrete floor slab over a gravel fill forms also the foundation of the house—a method perfectly satisfactory where, as here, no deep frosts are to be expected.

In the multifamily houses this independence of approach has controlled the entire exterior design, and the hinged-flap ventilators that take the place of windows are handled in such a way as to minimize trim and frame members. Notice too the complete simplicity of the joint at the corner of the overhang. This method of design leads to a minimization of trim members and moldings and is at least partly the reason why these exteriors have such a fresh, clean, and beautifully clear expression. Had the designer faced with the same plan said to himself, "These are rooms; of course they will need windows," and used the normal double-hung or casement sash, not only would the combination of shade, shelter, and ventilation been much more difficult to achieve, but the entire quality of horizontal accent that makes these buildings what they are would have been lost.

Where more complex uses are present the same careful study has led to types of detail even more independent. For example, in the utility buildings and the toilets, where ventilation is a primary consideration, the whole handling of the ventilating louvers has been made into a basic factor in design. Notice how in the utility building section given a hinged cover behind the louvers can be either dropped down beneath the bench to allow a full sweep of air or, when the weather is colder, closed. This has obviated the necessity of opening windows and allowed the obscure glass to be fixed permanently in place, and the continuous 8-inch vent above the glass is covered with simple netting cloth.

In these Farm Security developments through the far western states there lies, I think, a great lesson for the everyday architect planning the everyday building. This particular kind of imaginative and creative approach to a problem, in general and in detail, is not by any law that I know of limited either to government-financed or low-cost buildings. It certainly is not necessary, because one has a little more money to spend, to become at once bound by old conceptions of doors and windows and walls and roofs. In any building each architectural detail exists for a definite purpose, and the building itself is built because of a human need. Could we but learn to study these human needs as freshly and independently as they have been studied in these communities, if we could but analyze the purposes of each building part with as little dependence on convention or past usage, could we but think in as powerful a manner of the necessary integration of form and use and structure, there would be no limit to the architectural progress we might make. These communities are human and attractive because their designers understood people and their needs, and insisted that all of those needs—intellectual and emotional as well as physical—should be taken care of. They are beautiful because designed by artists, to whom creation was not limited by any economic deadline and to whom it was as necessary to think in creative form terms of a privy as of a community center. They are satisfactory because within their limitations of necessary economy each practical problem was approached not only as a means to a physical end but also as a means to a new and beautiful creative form.

BANTAM, CONNECTICUT

AMERICA'S SMALLEST DEFENSE HOUSING PROJECT

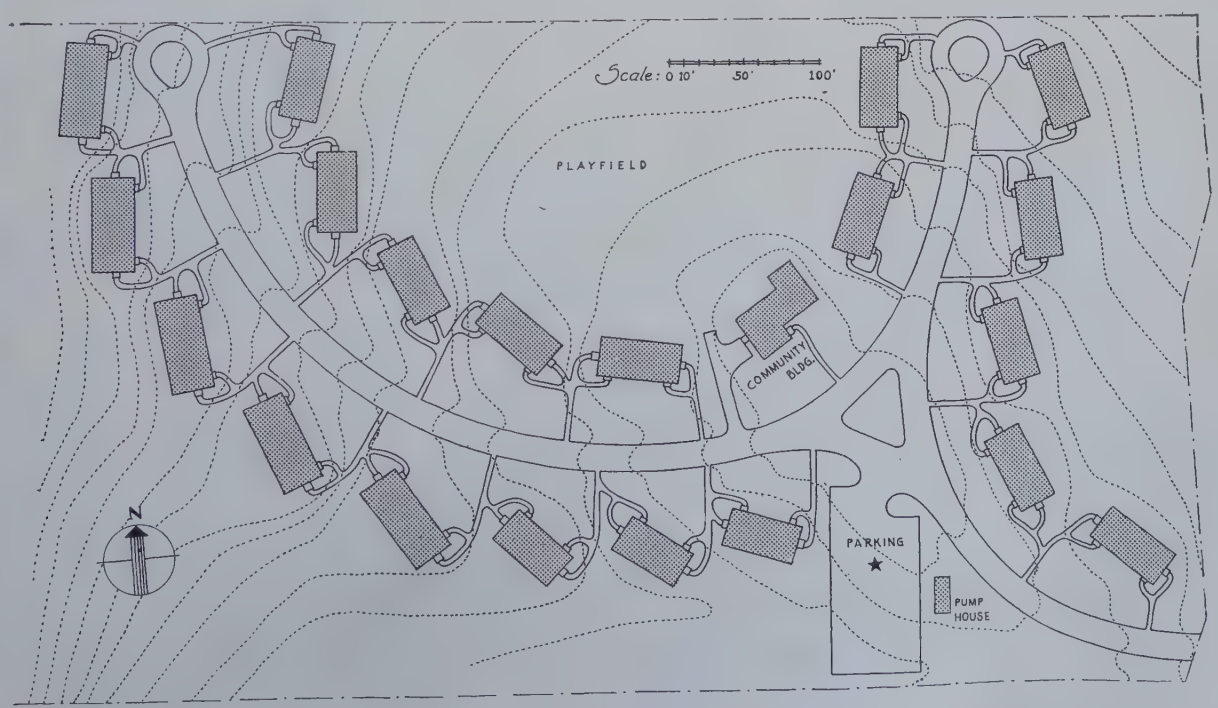
BY ROBERT I. HOYT

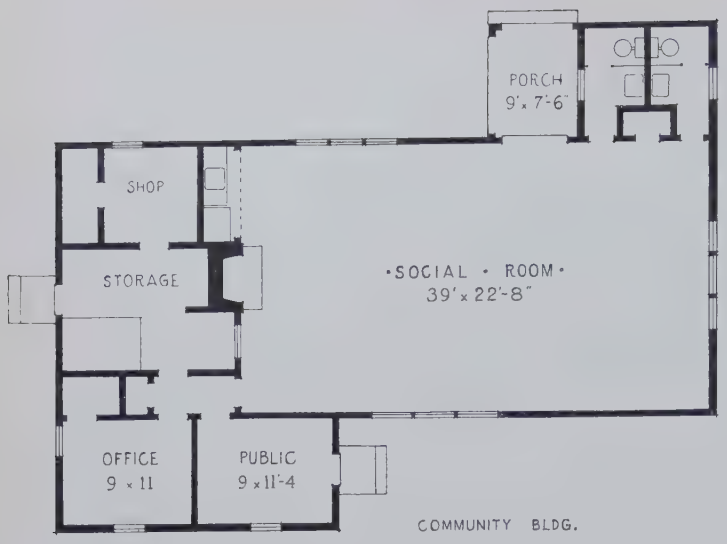
Rarely does one find a successful and expanding industrial establishment in an area otherwise almost completely rural in character. The Bantam, Conn. housing project is unique in that it is not only the smallest industrial defense housing development in the country, it is unlike other housing developments which are crowded into highly urbanized areas adjacent to the familiar sort of industrial development.

The Architect, David C. Sanford, Jr., was confronted with a two-fold problem—that of developing a plot to support forty dwelling units, and the allowance for possible expansion should further factory expansion demand this. From the beginning it was thought desirable to disturb the land as little as possible, for both economic and æsthetic reasons, and to maintain a rural character in the project through easy, rational layout, and selection of building forms and materials normally found in such a location.

The high point of the site was given over to the Community Building, and other sites were considered for residential buildings. Roads were then laid out to serve these buildings. Lot lines were studied, though the present single ownership may not even survey them. These suggested lots may thus be readily sold at some later date, yet there may be maintained a protective strip of land along all property lines for the benefit of

BUILDINGS ARE PLACED IN SUCH A MANNER THAT THEIR LENGTH PARALLELS THE GRADE OF LAND, MINIMIZING CUT AND FILL. THE GRADE HAVING ESTABLISHED A FANNING-OUT OF THE BUILDINGS ALONG THE ROAD, THOSE NOT SIMILARLY AFFECTED HAVE BEEN BROUGHT INTO HARMONIOUS CONFORMANCE WITH THEM. SITE DEVELOPMENT WAS AT EXCEPTIONALLY LOW COST PER UNIT. SITE PLANNING ASSISTANCE WAS BY ROBERT I. HOYT. GILMORE D. CLARKE AND MICHAEL RAPUANO WERE THE LANDSCAPE ARCHITECTS



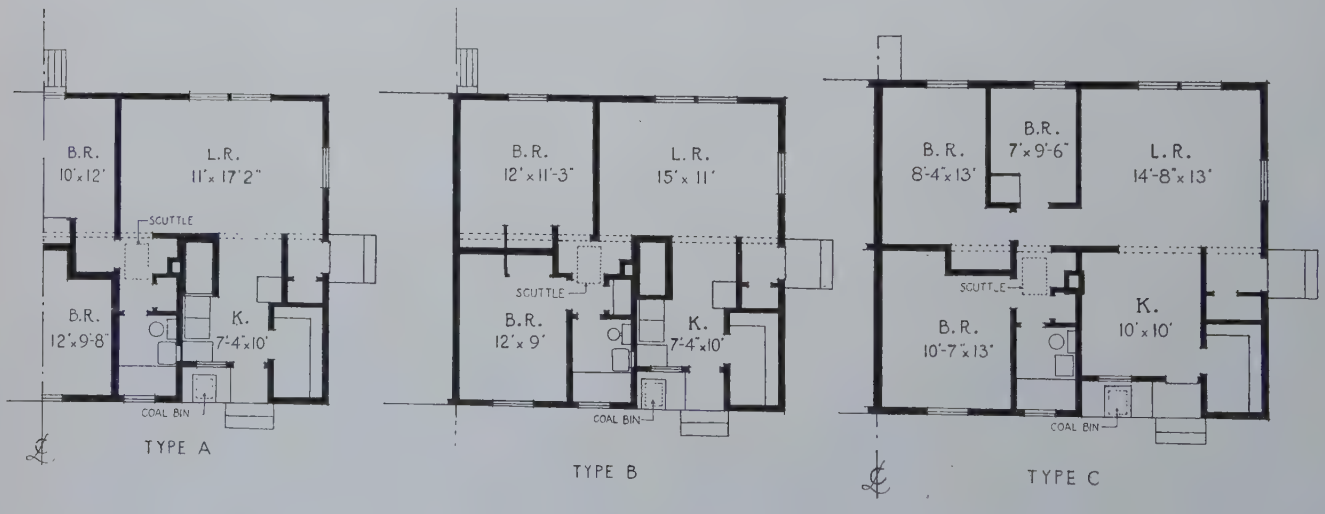


COMMUNITY BLDG.

THE COMMUNITY BUILDING MAY BE MAINTAINED BY A COMMUNAL ORGANIZATION MADE UP OF THE LAND OWNERS AS HAS BEEN DONE SO SUCCESSFULLY IN OTHER PLACES. THE PLAN PROVIDES FOR A SOCIAL ROOM, OFFICE, PUBLIC SPACE, AND A STORAGE ROOM AND SHOP SPACE

the community as a whole. The road is considered but a means of access to the residences, and the kitchen doors are faced toward it, incidentally cutting the length of the paths. Private gardens may be developed on that side of the structures commanding the better outlook. Lots on the inner side of the road curve open upon the playfield. The budget precluded building garages at this time, but the Architect has considered their possible future erection. This may be done through the simple expedient of building drives between the buildings on the line of the present paths to serve double garages or carports placed slightly to the rear of the buildings.

The kitchens, as may be seen from a study of the unit plans, are not particularly well lighted, despite one casement window and a glazed door. This was dictated by the desire for simplification of the utility layout which, in combination with the demand for storage space, seems to have been a difficult thing to handle. The necessity for a separate utility room has been eliminated by the inclusion of a combination range and space-heater in the kitchen. Both units burn coal. Construction is simplified as much as possible, and the use of stock lumber lengths without undue cutting worked in where possible. All details of carpentry and masonry were designed with local workmen in



THE DWELLINGS ARE DESIGNED FOR SIMPLE AND EASY LIVING OF THEIR OCCUPANTS, WITH THE BUDGET A STRONG FACTOR IN DETERMINING ALL POINTS OF DESIGN. THE UTILITY ASSEMBLY OF KITCHEN AND BATH EQUIPMENT IS STANDARDIZED FOR REASONS OF ECONOMY. THE COVERED ACCESS AT THE KITCHEN ENTRANCE GIVES SHELTER AT THE MOST-USED EXTERIOR DOOR AND FURNISHES A SUCCESSFUL MEANS OF PASSING COAL INTO THE KITCHEN BY MEANS OF A SIMPLY-CONSTRUCTED BIN EXTENDING THROUGH THE WALL, AND HAVING A HATCH ON THE EXTERIOR AND DOORS ON THE INTERIOR. THE FRONT HALL, CREATED BY THE EXTENSION OF A BAFFLE PARTITION IS UNUSUAL IN LOW-COST PROJECTS, BUT SEEMS JUSTIFIED IN THIS CLIMATE AND ON A SOMEWHAT UNPROTECTED HILLSIDE. UN-COMMON FEATURE OF THE KITCHEN EQUIPMENT IS THE COAL-BURNING RANGE AND SPACE-HEATER, ELIMINATING THE NEED FOR A SEPARATE UTILITY ROOM

EARLY STUDIES FOR THE BUILDINGS REVEAL SINGLE - FAMILY DETACHED - DWELLINGS, BUT THROUGH DIFFICULTY IN OBTAINING SUCCESSFUL LOT ARRANGEMENT AND LOW UTILITY COSTS THESE ARE BROUGHT TOGETHER TO FORM SINGLE-FAMILY SEMI-DETACHED-DWELLINGS. THE SOMEWHAT TRADITIONAL APPEARANCE OF THE BUILDING IS THE RESULT OF A STRAIGHTFORWARD USE OF WOOD AS A BUILDING MATERIAL, AND OF A DESIRE TO CREATE A GROUP OF STRUCTURES THAT WOULD BE POPULARLY SALEABLE AT SOME FUTURE DATE

mind, that they might not be foreign to their past experience and cause unnecessary delay in the justly stringent calendar determined for the progress of the construction. Ordinary wood frame is used on concrete block foundation walls, and all interior surfaces are of wall board. In character with the desire for rural atmosphere, the exterior walls are of rough-sawn white pine siding, treated with heavy-bodied stains, varying in color with the buildings. The natural weathering will aid the aging of the project and its proper settlement into its surroundings. Many indigenous trees and shrubs will be planted in a simple, natural pattern throughout the site as is desirable to aid the appearance of the buildings, and to provide æsthetic relief and shade. Only that part of the property near the buildings which has been scarred by construction operations is to be graded and seeded for lawns. It is hoped that the rest of the land will be left in its present natural form with the fields of flowers and the gray stone walls to remain where possible and maintain the truly rural character of the project.

THE SITE, WHILE HAVING ALMOST IMMEDIATE ACCESS TO THE FACTORY, IS CUT OFF FROM IT BY INTERVENING TREES AND THE CURVE OF THE HILL UPON WHICH IT IS SITUATED. THE LAND OVERLOOKS A TYPICALLY PICTURESQUE AND CHARMING CONNECTICUT VALLEY. FROM THE COMMUNITY BUILDING THE PLOT FALLS AWAY IN AN EASY GRADE THAT LENDS ITSELF READILY TO THE PLACING OF ROADS AND BUILDINGS

INDIAN HEAD EXPERIMENT IN PREFABRICATION

AN ANALYSIS BY FREDERICK GUTHEIM

Certainly the most spectacular of the defense housing projects is that at Indian Head, Maryland, where the best efforts of ten housing prefabricators are building 650 houses. Here defense housing hopes to get closer to the ultimate solution of the demountable house problem.

What did prefabrication have to offer this quest for a good demountable house? Could the techniques of mass production, interchangeable parts, modular design be harnessed to the solution of defense housing's principal problem?

It was not expected to produce a "model home" that would bring patent medicine relief to defense housing; it was not designed as a special kind of proving ground to demonstrate the relative efficiency, costs, or structural quality of the various methods of prefabrication. At Indian Head the PBA, assigned the job by FWA, knew only that 650 houses were needed quickly and at minimum cost; that, like much defense housing, they would not be needed on the same site when the emergency ended.

Contracts were negotiated with ten prefabricators, partly to speed up erection, and partly to provide a variety of types. Participating in the construction were E. F. Hauserman Co., Standard Houses Corp., Allied Housing Associates, Inc., Home Building Corp., National Homes Corp., General Fabricators, Inc., Tennessee Coal, Iron & Railroad Co., Lockwall House, Inc., T. Calvin Owens, Harwood-Nebel Co.

Construction types included steel panel, wood frame and plywood, pressed board, Masonite board, steel frame and panel, steel frame and plywood covering.

Modifications in existing designs were made in nearly every case, partly to insure conformance with defense housing standards, but mainly to promote demountability. These minor changes did not seriously affect the prefabricators' normal production methods.

The site plan, by Clarence Stein, represents an intensive application of the *cul-de-sac* principle. Floor plans of the ten house types were reasonably similar. The main factor considered in siting the individual houses was the position of the living room and entrance.

As the work neared completion (the project was occupied in October) one house of each type, chosen by lot, was demounted, loaded on trucks for a 35-mile trip over rough, winding country roads, and then reassembled. Records of the time and cost of these operations, and analyses of method, were made by PBA technicians.

The answer to whether prefabricated houses can become demountable houses is certainly a big *yes*. On the question of whether prefabrication lends itself to greater demountability and significant cost savings over site-fabricated and specially-designed houses, there is still a considerable degree of reasonable doubt.

Prefabrication has had speed to recommend it, and in some cases it can show actual savings in cost. But it is not yet within sight of that rosy future as the solution to the national housing problem predicated by the omniscient editors of FORTUNE in 1930, and by scores of journalists since. Prefabricators now have to meet explicit minimum standards set by government housing agencies.

At Indian Head the prefabricated house appears *en masse*. The effect is mitigated somewhat by ingenious site planning and an audacious use of color, but the entire effect of scores of identical units with minimum standards is generally depressing. Structural standards are not bad, but its inflexibility, its incapacity to make individual adjustments to site and to environment is clearly shown. A community of 650 families requires more than houses in order to live at modern standards. The cost of necessary facilities, which many prefabricators would rather forget, is here thrown into sharp relief.

Demounting costs were as high as $700 and as low as $400. In most cases the figure has been about $500, mainly represented by labor costs. Actual demounting and reassembly usually took one working day, using crews of ten to twenty men. Models with initially low construction costs were the cheapest to re-erect. Very little difficulty was encountered by out-of-state prefabricators in getting houses to the job, and shipping costs were moderate. Few houses were damaged in demounting, and little material was lost.

Houses are conventional in appearance. None of them look "modern" or "architectural." Few even look "prefabricated." What one sees is not novel, except as the results of such experiments as those of the Forest Products Laboratory with stressed plywood panels are new. The most modern and successful types of prefabrication are those incorporating technical advances. These are generally the common property of all builders, prefabricators or not. It is significant that the least revolutionary types of building at Indian Head are among the most successful.

The Potomac Heights experiment does not prove that prefabrication is going to solve the defense housing problem. It does not prove that making all the parts of houses in a factory and assembling them on the site is necessarily more economical or more efficient. What it does prove is that prefabricators can build a house that meets defense housing standards, erect it promptly, and adapt it for reasonably cheap and efficient demounting.

In charge were Louis A. Simon, PBA Supervising Architect; Gilbert S. Underwood, Consulting Architect; H. Arthur Tucker, Associate Architect.

IS HIGH EXPLOSIVE THE GREATEST DANGER?

BY SERGE CHERMAYEFF

The A.R.P. Committee of the Washington, D. C., chapter of the A.I.A. has handed a report to the Institute in which the chairman, *Horace W. Peaslee,* has some very wise and apposite things to say. His views are backed up by a program of working sub-committees which take the form of round table discussions on specific problems of defense; such as the provision of shelters in department stores which are being developed out of plans contributed by local merchants and are being pooled for purposes of analysis, and the adaptation of parking garages for shelters. In this connection San Francisco is mentioned as providing an example of such dual purpose construction to which I should like to return later. Shelters in housing projects, and evacuation camps, which include an examination of the sort of shelters required and the possibility of using them for educational and recreational purposes will be discussed. The committee is further making an analysis of the various precedents supplied by English and French examples as well as such construction by the CCC, Forest Service, NYA, and other American agencies which could be applied to this problem.

Mr. Peaslee says in his report that *"these are specific problems to whet the interest,"* and among his general remarks makes such excellent points as *"what was current yesterday is obsolete today,"* and further, *"if the architect is not to be held accessory to wholesale slaughter if he hands out the wrong prescription"* advises that a more thorough examination of facts be made by physical tests of materials and construction under the new conditions of stress, strain, heat, etc., set up by the latest weapons of air attack, before *"American architects will be satisfied to accept ex cathedra rulings as to right and wrong procedures."* He also dwells on the necessity of studying general factors ranging from such data as integration of planning to problems of blackout, etc. It would seem that the Washington committee is making a comprehensive and intelligent examination of the problem of A.R.P.

Unfortunately, the breadth of Mr. Peaslee's report was narrowed, in the particular summary read by me, to a consideration of actual shelter construction, and the interest was focused particularly in the shelter against high explosives. This ever recurring process of boiling down all shelter problems to protection against direct hits is implied in the editorial title, "Needed: sound working knowledge on bomb shelters," and the further emphasis in the editorial of the architect's function—that of designing shelters. This appears to be the common trend of thought and yet it seems clear that one should differentiate between the technical engineering skill, as applied to a specific shelter, and the planning ability, which can be applied to the problem of civilian defense as a whole. This differentiation has a very important bearing on the contribution of architects within the A.R.P. program.

When shelter construction is considered as a technique it comes specifically in the range more of the structural engineer than it does in the wider range of the architect. It cannot be denied, and indeed I have attempted to stress, that if shelter design is to reach its most satisfactory form it presupposes a close collaboration between both engineering and architectural professions as well as contracting, manufacturing, and administrative forces. What requires emphasis again and again is that the architect's important task is to provide general planning principles which affect specific problems such as shelters, as well as other aspects of A.R.P.

The dual purpose shelter, and the allusion to the San Francisco project, provides a good example for analysis in terms of wider issues than the design of such a shelter.

The underground garage now under construction in Union Square, San Francisco, has been erected specifically for the purpose of relieving traffic congestion and to solve a very serious parking problem. If its possible use as an aid raid shelter had been advanced as an argument at a recent hearing for the waiving of priority rules, this would have given an indication that the shelter use was really intended. No such argument was, in fact, put forward. On the contrary, inquiry has revealed that very costly reconstruction would be involved to make the garage usable as a shelter. If one considers that this garage is in the center of the downtown district among large stores, business premises, and hotels mostly of steel frame construction, its possible use as a shelter is very much mitigated. Far less costly and probably more efficient shelters to accommodate a larger number of people could be made more accessible within these various steel structures. Such a procedure would in fact provide more economical protection in this area if the provision of such protection were the objective. It appears doubtful, however, whether the provision of such protection is desirable and would serve any useful purpose.

The particular area involved has a very large daytime population which is drastically reduced, with the exception of the hotels, at night. It seems doubtful that any possible daylight attacks which might be made on San Francisco would affect this particular area to any considerable extent. Bomb-proof shelters in this area would be superfluous. Such protection as would be required in the daytime against splinter from anti-aircraft

or stray machine gun bullets would be quite adequately served by the existing buildings, after minor modifications. The objectives for high explosive attack, such as docks and industry, lie well outside this particular area. The precious loads of high explosive carried by enemy aircraft from distant bases in the case of daylight raids would obviously be aimed at military objectives. If the purpose of the air attack was the dislocation of civilian life and an attempt to panic the population, the most likely weapon to be chosen is not high explosive but incendiary bombs, for a very good reason.

San Francisco appears to provide a very typical case against protection being centered on so-called bombproof shelters. Except for the downtown buildings, civic center, and certain industrial, naval, and military buildings, by far the largest proportion of all buildings spread over a very large area, are of timber. The more effective weapon per weight for the purpose of attack on the civilian population, or for general purposes for that matter, is the incendiary bomb, and these attacks are far more likely to be made at night when, notoriously, defense is less effective.

The predominance of flimsily constructed and highly inflammable buildings is even more true of the widespread industrial, military, and naval zones about the Bay area than it is of San Francisco itself; for instance, in Vallejo and Richmond where highly vulnerable defense housing is closely clustered round ship yards, industry, and so on, often among sunburned hills which even under normal conditions present a constant fire hazard. Here the problem of A.R.P. seems to resolve itself principally into one of providing efficient fire fighting organizations and all that that implies, as well as the provision of shelter for those who might be made homeless over night.

It is perhaps timely to repeat what was said by the ARCHITECTS' JOURNAL in England last February. They pointed out something which had not been foreseen by any authorities in England, namely, *that for every person wounded by a bomb ten or twenty would lose the use of their houses.* In other words, rest centers, temporary housing, repairs, provision for communal services such as crêches, field kitchens, and so on become a major A.R.P. problem. That this aspect of air raids did not become apparent except after prolonged war conditions is responsible for the lack of literature on this particular subject and is reflected in the lack of consciousness of it here. Certainly nothing has been emphatically stated to this effect in the technical press in the United States. If this fact, however, is accepted it reveals all sorts of planning issues in connection with A.R.P. to which the architects might well apply themselves. The ARCHITECTS' JOURNAL makes this point in alluding to the unsung heroes of the desk, particularly the local authorities who, under war conditions, have to deal with an infinite variety of special war time problems, such as A.R.P., in addition to all those normal ones which can only be reduced but never totally abandoned, and which are necessary for the continuation of essential activities. It is not irrelevant to repeat that the work of local authorities could be enormously lightened by architectural assistance in *formulating their A.R.P. program.*

If the conjecture as to the form of attack and its consequences, put forward above, is even partially accurate, this suggests in its turn that a special subject for study might well be an entirely new form of shelter. Such shelters structurally would make no attempt to protect its occupants against a direct hit by high explosives but would be calculated to provide ample protection against the secondary effect of splinter, blast, incendiary bombs, and gas, and be specifically designed to offer refuge to those made temporarily homeless. The accommodation would comprise sleeping quarters, rest rooms, cooking facilities, first aid to deal with shock and minor injuries, and could be placed within easy reach of highways, to serve vulnerable residential areas around industry, etc., at a distance of some miles from these.*

Individual units could be relatively small so that they might be standardized in type for quick, economic erection and so designed that they could have a peacetime utilization. In the temperate climate which continues throughout whole seasons in some parts of the States, as for instance in California, an equivalent could be found in community buildings on the model of the FSA migrant camps, around which evacuees could group their tents and sleeping bags. In either case, the shelter would serve a purpose somewhere on the demarcation line between target or vulnerable areas and invulnerable or reception areas.

The definition of a target or vulnerable area here, illustrates the enormous difference between the United States and most European countries. Certainly in the Middlewest, Northwest, Southwest, and West, population is concentrated in a few points, with large voids between of thinly or totally unpopulated areas, so that even outside of say a five mile radius of a target the country may be classified as an invulnerable, reception area. The type of decentralized shelter outlined would provide for a condition which has few equivalents in England and could be developed not only to serve the purposes already mentioned but might further be valuable as outposts of fire-fighting organizations to cope with the special hazards such as tinder dry forests, grass, and crop lands, created here by climatic conditions.

To sum up, it would appear to the author that the special conditions prevailing in certain parts of the United States require an entirely fresh approach to the problem of A.R.P. and should produce entirely new forms of planning and construction to meet these specific demands. It is suggested that among these the predominantly important type of shelter requiring the architect's attention is not that against high explosive bombs, which is the most widely discussed and popularized item in the whole program of A.R.P., but a series of units developed specifically to cope with the greater problem of the mitigating effects of widespread conflagration.

**Since Mr. Chermayeff's article was written, there appeared in the* SAN FRANCISCO NEWS *(October 23) a story regarding the preparation of architects' plans for a "refugee town" there which can be constructed on a few hours' notice. Already completed under the Red Cross Disaster Relief Commission are preparations for a town of 1000 persons, with sleeping quarters to be grouped around central buildings equipped for cooking, eating, bathing. Local architects worked out the drawings to prepare for disaster or civilian defense needs. Dormitories of 50 beds will accommodate single men, single women, and families. Family space will be partitioned off for privacy. Biggest problem, architects point out, is accumulation of building material on short notice.*

WASHINGTON REPORT

COMPILED BY A. D. TAYLOR OF CLEVELAND

DEFENSE HOUSING

Until the new Lanham Act is passed by Congress, additional funds for defense housing will be very limited. Within the past week this bill has been further considered. Indications are that two important committees are making a careful study of the entire Defense Housing program and, in all probability, final action upon this bill will be delayed until the reports to be prepared by these committees are made available to the Congressional Committees before whom hearings on this bill are being held. In the meantime, pending the date when new funds will be available, new projects are being approved, and Architects, Engineers, and Landscape Architects are being selected, to be ready to proceed under contract, with the preparation of plans, specifications, etc., as and when actual monies are available. It seems likely that an increased proportion of these Defense Housing projects will be done through the USHA (which has been excellently organized from the beginning of the Defense Housing program to undertake this part of the work), and a decreasing proportion will be done through the PBA (to which organization an increased amount of work will be allocated in connection with the new Defense Public Works Program).

It is reported that all of the hospital and school projects with which the Federal Government is concerned will probably be administered through Public Buildings Administration, and in all probability much of this planning work in the architectural and engineering phases of these projects will be done by the present staff of the PBA. There are reported to be approximately $650,000,000 worth of such projects set up and ready for final approval, against available funds approximating only $150,000,000, which indicates that without additional appropriations being made available for this purpose, less than one in four of these projects will be approved.

REHABILITATION

There continues to be considerable Government activity, looking toward the time when funds may be available for a definite program of Urban Rehabilitation. A few cities, where these problems exist in a very definite way, are already beginning to lay the ground work for a comprehensive and thorough program of planning, generally through the agency of well-organized City Plan Commissions. This movement will tend to increase, and should provide much employment for members of the technical planning professions qualified to provide service in this field of planning.

The City Plan Commission is the logical agency through which this preparatory planning should be done, and if such work is to be thoroughly completed, there must be adequate funds made available, through the respective city governments, with which to conduct such preparatory studies. It is not likely that the Federal Government will encourage Federal aid in the Rehabilitation Program to those cities which fail to produce the desired information through City Planning procedure relating to problems of rehabilitation.

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CIVIL SERVICE

The recent examination for architects produced a roster of only 1968 architects in different grades, with the Design Option; 93 architects on the roster for Specification Writing; and 120 architects on the roster for Estimating. This examination was given during the late spring of 1941. Because of the "Priorities Order" of recent date, there has been an avalanche of inquiries concerning the possibility of Government employment. It is estimated that of the total number of approximately 15,000 architects in the United States, between 11,000 and 12,000 are registered, and approximately 4,000 are members of the A.I.A. (including associates and junior associates). If the same examination were to be given today, it is estimated that the eligibility list would be very greatly increased. It is not, however, proposed to set up another architects' examination immediately; but instead, to increase the Civil Service roster of Estimators and Specification Writers through the Engineers Examination (U-69).

The recent Civil Service Examination for Landscape Architects has produced a roster on the Civil Service rolls as follows:

Principal Landscape Architect (minimum salary $5600)	32
Senior Landscape Architect (minimum salary $4600)	75
Landscape Architect (full grade, minimum salary $3800)	115
Associate Landscape Architect (minimum salary $3200)	235
Assistant Landscape Architect (minimum salary $2600)	386
Junior Landscape Architect (minimum salary $2000)	295

This roster has been set up in two parties; (a) those landscape architects who have a college or university degree (75% of the total roster), and (b) those landscape architects who do not have a college or university degree (25% of the total roster).

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PRIORITIES

The recent order concerning priorities will, unless modified in some respects, create a critical condition, particularly in the architectural profession, among those architects whose practice has been largely confined to residential work. To offset this condition it is likely that an increased program of housing, encouraged by the Federal Government, will provide employment for many architects, and landscape architects, as well as Civil and Mechanical Engineers, who might otherwise be unemployed. Many of the reasons advanced for the desire to procure Government employment under these conditions indicate that the reason for unemployment is due to

inability to procure building materials because of the "Priorities Order." All residential building other than the small home will undoubtedly be very much curtailed under the present contemplated procedure. This condition will also react equally unfavorably upon this part of the building construction industry.

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TECHNICAL GROUPS MEET

At a recent meeting held in Washington, and attended by representatives of the American Institute of Architects, the American Society of Civil Engineers, and the American Society of Landscape Architects, it was decided to continue the work of this joint committee in the interests of the technical planning professions.

There are important problems with which these professions are confronted and which seem to require appropriate joint action in order that the respective interests of each profession and its membership may be appropriately protected. These questions concern (a) equitable fees for different kinds of work in connection with the many Government projects, (b) conferences regarding contract forms prepared by Government agencies covering the services of representatives of the technical planning professions, (c) maintaining of an equitable schedule of fees of adequate amount to which the offices in private practice are entitled. (d) a proper standard of fees for personal consulting services, (e) discouraging of any procedure tending toward the adoption of competitive bids for technical planning services, and (f) a joint determination of the ways in which the members of the technical planning professions can be of maximum service to the Government agencies in this emergency program.

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TECHNICAL SERVICE FEES

A procedure is now being followed in the Quartermaster General's office (Construction Division) of negotiating "lump sum fees" for complete professional planning services on cantonments, ordnance projects, and storage warehouse projects. The negotiations are being conducted on the site, between representatives of the Contract Board in the Washington office of the Quartermaster General, and the parties selected to provide the necessary technical planning services. These negotiations are usually consummated in the office of the Zone Constructing Quartermaster, for the zone in which the project is located. A few of these "lump sum" contracts for complete planning services have been negotiated to date, mostly confined to additions to existing cantonments.

The possibility of requesting competitive bids, from members of the technical planning professions, covering complete planning services on specific projects, has not been entirely eliminated. While this procedure is contrary to the ethics and practice of the major technical planning professions, it continues to be under consideration as a possible procedure to be adopted in some of the Government agencies. Such a proposal will meet with strenuous objection from the professions.

The following is a list of the schedule of salaries which has been generally approved by a number of Architect-Engineers in connection with cantonment projects:

Classification	*Min.*	*Max.*
Architectural Designer	$250	$450
Assistant Engineer	250	450
Chief Architect	400	650
Chief Designer	350	500
Chief Draftsman	300	450
Chief Engineer	400	650
Draftsman	150	300
Engineering Designer	250	450
Junior Engineer	150	250
Chainman	100	150
Chief of Party	200	300
Chief Surveyor	250	450
Levelman	175	250
Plane Table Operator	200	300
Rodman	125	175
Transitman	175	250

The maximum salary schedule in the foregoing list includes an allowance to provide for abnormal living expenses and for cost of travel to and from project.

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QMC OFFICES

An increasing amount of negotiations in connection with planning work for army projects may be done through the Zone Constructing Quartermasters Office. The following list gives the location of these offices, and the names of zone architects and zone engineers serving the respective offices:

Zone I
Army Base, Boston, Mass.
Zone Engineer—Lt. Jos. M. Geoghegan
Asst. Zone Architect—Frank W. Crimp

Zone II
120 Wall Street, New York City
Zone Engineer—Robert B. O'Connor

Zone III
Standard Oil Building, Baltimore, Md.
Zone Engineer—Charles H. Stevens
Zone Architect—Louis M. Fisher

Zone IV
494 Spring St., N.W., Atlanta, Ga.
Zone Engineer—Lt. L. W. Pickering
Zone Architect—E. D. Slater

Zone V
232 N. High St., Columbus, Ohio
Zone Engineer—Camden P. Fortney
Zone Architect—Jos. L. Weinberg

Zone VI
20 N. Wacker Drive, Chicago, Ill.
Zone Engineer—Robert I. Randolph
Zone Architect—C. Herrick Hammond

Zone VII
14th & Farnam Sts., Omaha, Neb.
Zone Engineer—William C. Grove

Zone VIII
Fort Sam Houston, Texas
Zone Engineer—Edward N. Noyes
Zone Architect—Lt. Col. Roy Leibsle

Zone IX
74 New Montgomery St., San Francisco, Calif.
Zone Engineer—Harry W. Dennis
Zone Architect—Timothy L. Pflueger (Advisory capacity)

★

EMERGENCY CONSTRUCTION PROJECTS

From the inquiries which continue to be received it continues to be evident that many men in the technical planning fields should read more carefully and should make it a point to procure the many releases which are promptly sent from different Federal agencies, either through a general mailing list or upon specific request, concerning defense projects on which there may be opportunities for employment as the "Primary Contracting Individual," or as a salaried employee. These periods of employment are usually of short duration,—from a few weeks to a few months.

October 17, 1941

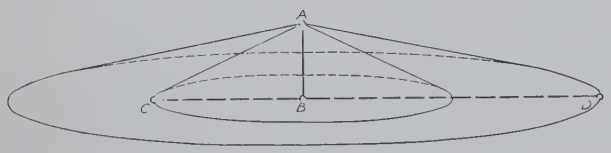
PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M.Arch.

LIGHTNING PROTECTION FOR TREES

Index No. **E 3 p** MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



Minimum Cone BC=2AB Maximum Cone BD=4AB.

CONE OF INFLUENCE. The National Fire Protection Association *Code for Protection Against Lightning*, 1934, points out that "experiments have indicated under certain assumed test conditions that a vertical conductor will generally divert to itself all direct hits which otherwise might fall in a cone shaped space, of which the apex is the top of the conductor and the base a circle whose radius is 2 to 4 times the height of the conductor."

Thus a lightning protected tree will tend to protect nearby structures or trees which are totally within the cone shaped space represented above. However, as Dr. M. G. Lloyd has shown, the *cone of influence* is not a zone of complete protection and lightning occasionally strikes within such a zone.

SET 20 NOV 1941

INFLUENCE OF LOCATION. Trees standing alone or above their neighbors and trees along avenues, streams and lakes, are struck more frequently than others.

SPECIES SUSCEPTIBILITY. There is considerable difference in susceptibility to lightning attack among trees of different species. Studies made abroad tend to show the following are relatively free of lightning attack:

beech	birch
horse chestnut	holly

The same studies indicate that the following are struck frequently:

oak	maple
elm	ash
pine	spruce
poplar	

As a general rule decayed or rotten trees are greater sufferers from lightning than sound, undecayed specimens. Deep-rooted trees are generally believed to be more liable to lightning injury than those with shallow and widespreading root systems.

PRINCIPLES OF TREE PROTECTION. Air terminals should be placed at the highest point or points in a tree. It is unnecessary to place air terminals on lateral branches where such terminals would fall within the cone of influence. Copper cable may be attached to trees with copper nails—never with steel nails—in order to avoid electrolysis. The use of insulated fasteners is never recommended. Three ground terminals should be provided for each conductor.

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Whitehead, J. B. Lightning Protection for Trees. Science, December 1, 1933. P. 507-8.
Lloyd, M. G. Lightning Protection for Trees. Science, March 23, 1934.

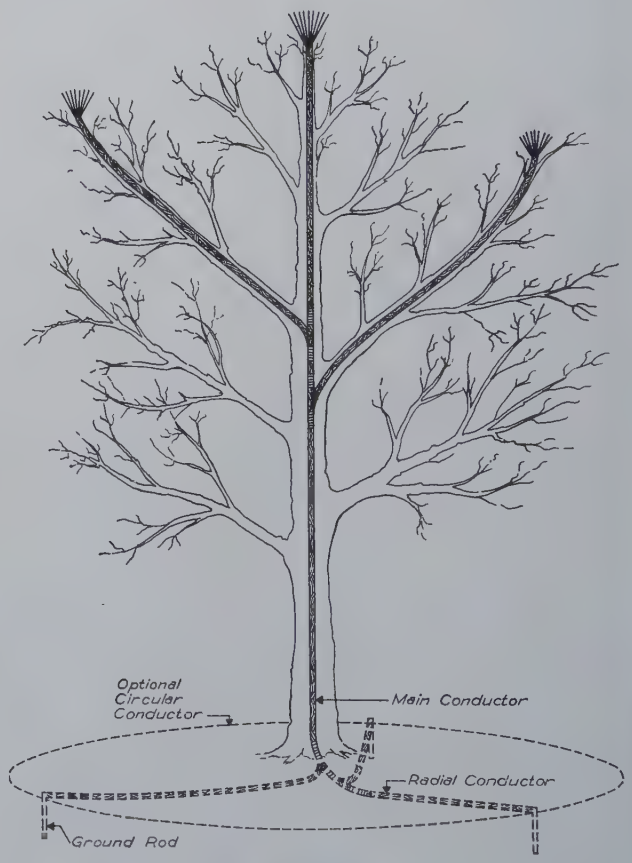
from U. S. National Park Service Tree Preservation Bulletin No. 5

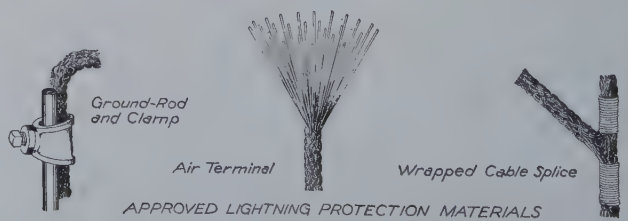
LIGHTNING PROTECTION FOR TREES

Index No. **E 3 q** MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 20 NOV 1941





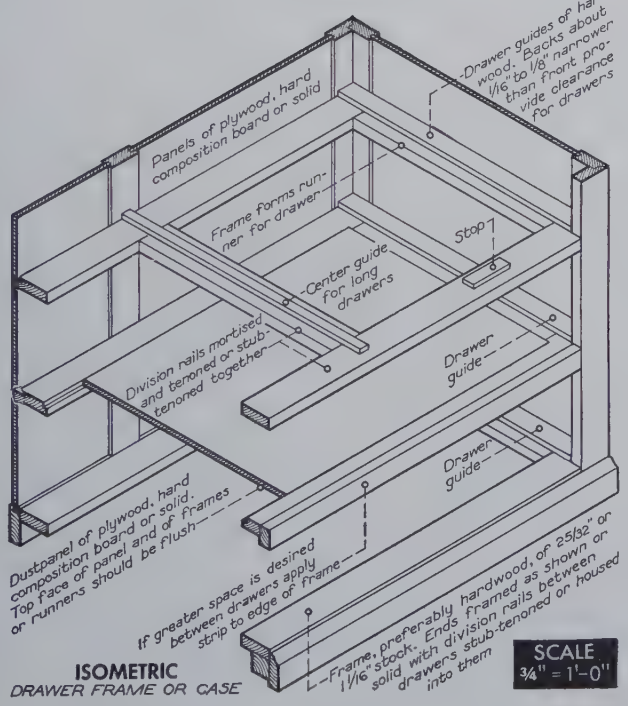
APPROVED LIGHTNING PROTECTION MATERIALS

CABINETWORK ESSENTIALS

Index No.
F 18 b
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 20 NOV 1941


Drawer guides of hardwood. Backs about 1/16 to 1/8" narrower than front provide clearance for drawers
Panels of plywood, hard composition board or solid
Frame forms runner for drawer
Stop
Center guide for long drawers
Division rails mortised and tenoned or stub-tenoned together
Drawer guide
Drawer guide
Dustpanel of plywood, hard composition board or solid. Top face of panel and of frames or runners should be flush
If greater space is desired between drawers apply strip to edge of frame
Frame, preferably hardwood, of 25/32" or 1 1/16" stock. Ends framed as shown or solid with division rails between drawers stub-tenoned or housed into them
SCALE 3/4" = 1'-0"

ISOMETRIC
DRAWER FRAME OR CASE

Wood selected for use in cabinet work must be thoroly seasoned and should be without defects in any exposed parts. The use of well-seasoned material reduces warping, shrinking or swelling to a minimum. Installation of cabinet work should be left until all the moisture within the building has evaporated and the plaster is dry.

The frame or case forms the containing framework of all typical cabinet construction, whether used to contain drawers or as a cupboard. The successful operation of drawers depends upon the construction of both drawer and the frame in which it works.

The drawing above shows the usual construction of a drawer frame, which should be so made that there will be only sufficient contact with the drawers to support and guide them. The frame is usually mortised and tenoned together with division rails between drawers added as required. In better work a dust-panel is installed in the frame between the drawers. It is important that if drawers are to operate properly, without sticking, that the guides at sides be narrower at the back than the front to provide necessary clearance.

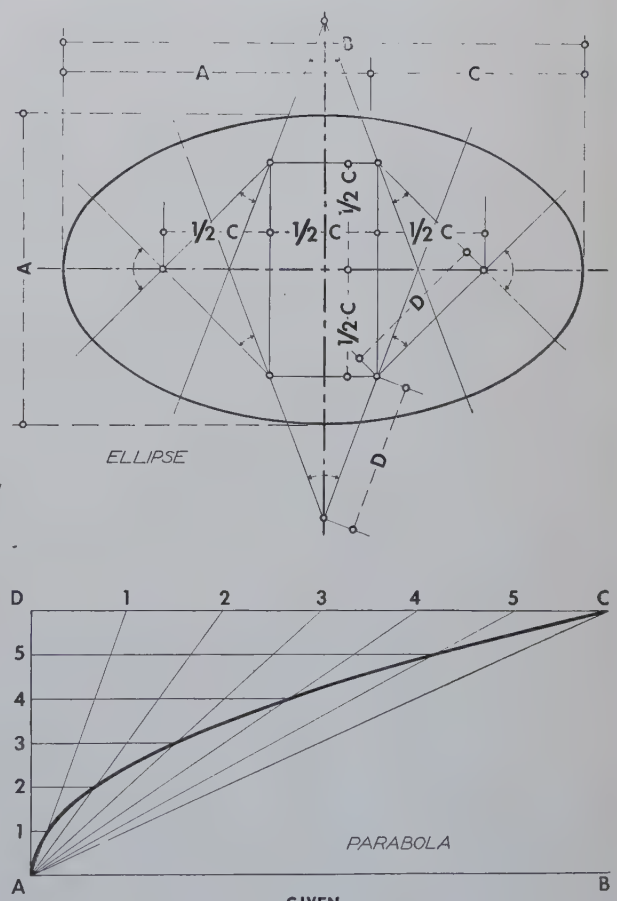
The drawer itself consists of a box constructed in a special manner. Drawers slide on bottoms of side pieces which should be dovetailed to the front, and in better work to the back also. Dovetails should be fairly small with very little taper, fit snugly and be closely spaced to form perfectly secure glued joints. See *Data Sheets* F18c, d.

ELLIPSE AND PARABOLA

Index No.
G 2 m
DRAFTSMANSHIP

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 20 NOV 1941



GIVEN

Directions of axis AB and point C on the parabola.

TO CONSTRUCT

Draw Line AD thru A perpendicular to AB and a line parallel to AB thru C.

Divide lines AD and DC into same number of equal parts.

Connect A with division points on DC; draw lines thru division points on AD parallel to AB.

Intersections of lines of the same number are points on parabola.

PUBLIC RELATIONS

A FORUM EDITED BY D. KNICKERBACKER BOYD

In preparing for a summary and index next month of the many items in a public relations program which have been covered during the year in this Section we find ourselves surprised at the number to which we have been unable to refer.

This does not mean that if all had been included it would be possible for the profession nationally or in any locality to put them all into effect, even if each one seemed feasible. Obviously some would be more suitable to one region than another, others applicable to the A.I.A. or to some of its Chapters and still others suitable for consideration by State Associations, or local groups. A number of Public Relations Directors are now employed in these various organizations and several of them are our correspondents. One has submitted the definition, given below, of "Public Relations."

It appears that certain "higher-ups" have felt that because a comprehensive program cannot be completely undertaken it is of little use to attempt any part. This is not so! We shall continue to offer suggestions piece-meal in the hope that here and there some one or more of them will be acted upon as a contribution toward an ultimate and coordinated whole, to be later participated in by other units and by many individuals.

This month we introduce another subject, a controversial one, relating to names on buildings, and we continue the discussion on Definitions. We also include a "revolutionary" article by Carlton K. Matson. Your comments will always be welcomed by:

D. KNICKERBACKER BOYD
No. 4 So. 15th St., Philadelphia, Pa.

DEFINING THE ARCHITECT

An engineer subscriber to PENCIL POINTS submits this:

(7) "An Architect should be qualified through natural inclination, training and experience in the Art of Construction to co-ordinate the building needs of his clients with their resources, and with suitable sites, available materials and public regulations, so that durable structures result, which function economically for their occupants and contribute to the common-wealth without offense to Esthetics."

Discussion (by him)

"This definition, like the definition of any idealized noun, is very general and it is not believed that any Architect now or in the past would fit into the definition completely. It would just as well apply to an Engineer if the following substitutions are made: —Engineer for Architect, Technique of Construction for Art of Construction, and Construction for Building.

"I have always felt that there is no categorical difference between an Architect and the Engineer if we accept the wording in the field of construction. Unfortunately the word Engineer has also been used to apply to those practical scientists who design radio, electric machinery, turbines, and any number of other things which were unheard of when the word Engineer and its predecessor Architect were first used."

An official of the A.I.A. offers this —in which the discussion follows the definition:

(8) "The Practice of Architecture is the scientific, aesthetic and orderly co-ordination of all the processes which enter into the production of a good building; performed through the medium of plans and specifications, preliminary drawings, consultations, investigations, contracts, supervision of construction and oral advice and direction.

"An architect is one who is technically skilled and legally qualified to practice the profession of architecture.

"The need of a definition is not only an important matter in public relations, but is equally so from the legal point of view for enforcement of registration laws. In connection with our work on Registration Laws we felt this need tremendously and made an effort to compose such a definition.

"In trying my hand at this most difficult of tasks I did so with the point in mind that the definition must, as above suggested, be suitable from the standpoint of both public and law as well as the profession itself. In addition to that, we know that as a matter of fact many of our architects have elected to follow various branches of the work such as design, specification writing, construction, etc., so far as their personal labor contribution to the job is concerned, and only maintain a directing hand over the balance of it.

"While I make no claim that this definition is, or should be, finally acceptable it was sent to the balance of my committee and drew a 10 to 1 vote in favor of submitting it to the Institute as suggestions, and they are here and now submitted for the purpose of contributing to the discussion on that subject.

"It is merely an effort to find something that will satisfy all three things —that is, law enforcement, actual conditions of practice, and public understanding, none of which should be overlooked. Since it was submitted to the Institute in 1937 no one has taken up the challenge to try and blast my efforts to pieces nor made an effort to bring on something better. Perhaps your readers can take a crack at it."

AND PUBLIC RELATIONS

(9) "By 'Public Relations' is meant the cultivation of appreciation by official and public groups of the mutuality of interest *arising from the utilization or interchange of goods and services.*

"A public relations program for the architectural profession should aim at (a) impressing public and official groups of the values to be derived through employment of architectural services; and (b) emphasizing the importance of the architect, as a designer, planner and coordinator (i.e. as 'layout' expert) to the community, state, and nation.

"Our definition of public relations was the one used by my colleagues and mentors in England and I believe it is a workable one. They seem to have done a good 'mutuality of interest' job on Anglo-U.S. relations!"

THE PHILADELPHIA COURT HOUSE AND POST OFFICE
BALLINGER COMPANY AND HARRY STERNFELD, ARCHITECTS

NAMES ON BUILDINGS

(1) Under this title, William Orr Ludlow, with that prescience which afterwards caused him to become, for years, the chairman of the A.I.A. Committee on Public Information, wrote an article published in the then *Journal of the A.I.A.* for December, 1928. It is today, in our opinion, so apropos that we quote from it as follows:

"Is the signing of a building by its author advertising? Of course it is. Is it therefore unprofessional? Has it ever been thought unprofessional for a sculptor to place his name on the fold of the garment of his statue or for the artist to place his signature on the corner of his canvas?

"Rather than being reprehensible I believe that this form of advertising is an architect's duty—to the public and to himself. The American Institute of Architects approves it, in fact recommends it, and architects individually quite generally assent to it. And yet it is not usually done.

* * *

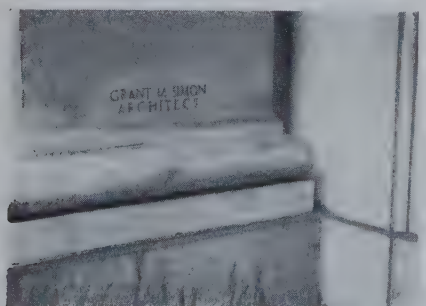
"By signing buildings, we help to educate the public to the idea that a really good building is a work of art, not merely a structure, and that its author is an artist as well as a master builder, and therefore signs his work like other artists; we bring public recognition to the architect in proportion to the merit of his building; we let the public know that the authors of good buildings have given of their individuality to their work and have produced something to be proud of; we give the architect a dignity in his own eyes that will make him ashamed of mediocre effort; and lastly, in an age when mechanical process and organization is submerging the individual and stifling individual expression we preserve to the members of our profession a recognition of individuality that will be an inspiration to better art, better building, and a more unselfish service to their fellow men through the profession of architecture.

* * *

"What need we said of the architects of Italy; every guide who shows visitors the wonders of their cities knows their names. And in France, one cannot walk many blocks without becoming acquainted with the names of many architects cut into quoins and cornerstones. Who can help knowing that Charles Garnier designed the Opera House of Paris, for at the side of the building on the *Place Garnier* stands his bust with his name inscribed beneath. And these are but samples of what one sees on every side as he travels about Europe.

"Isn't it then worthwhile, in the cause of public appreciation of architecture and for the standing of our profession, to forget our "diffidence," to overcome our "laziness," and to take the trouble to sign our buildings, as a plain duty to ourselves, the public, and the art of architecture?"

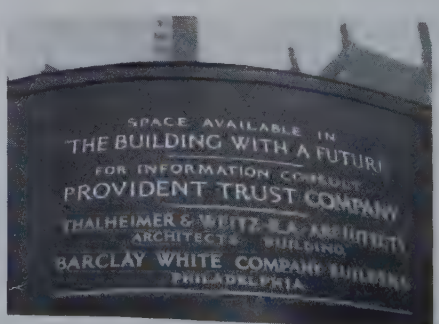
WILLIAM ORR LUDLOW



The Federal Government, in spite of some recent sins of omission with respect to architects' names in publication illustrating their buildings, has a regulation requiring that the names of certain officials, *including the architects,* be inscribed in the stone base, or otherwise placed on the exteriors, of Federal Buildings. In the uppermost illustration is shown a recent example of compliance with this modern custom, together with the name of the sculptor (more deeply cut) of one of the embellishments.

And of almost equal importance, from at least a temporary standpoint, we call attention to the illustration below showing how the public may be informed of "what's going on" behind a sidewalk shelter while a building is under construction. Misguided personal modesty has kept some architects from having their names thus included —with the result that passersby may assume that the building is being erected without the advantage of any architectural service.

Space does not permit us, at this time, to go further into the subject of placards and tablets on the exterior of places of historic interest, in connection with housing developments, on certified homes, and other types of buildings, nor to refer to the more usual custom of bronze plates or stone tablets in the interior of Schools, Court Houses, and other structures. Most of these are in the interest of identifying those responsible for the advantages possessed by the building (or mayhap, the contrary) in each particular case. This Editor hopes that the practice of suitably determining accountability, including the builder, will grow.



CONSTRUCTIVE REVOLUTION FOR ARCHITECTS

BY CARLTON K. MATSON

The architectural profession needs a revolution in the language which it uses to express its function to the public.

Every profession is likely to get in the habit of talking to itself, of using language which has a common meaning only to those who are practiced in the professional jargon. Business concerns get the same habit of talking to themselves about their products.

Is there any verb which expresses the central function of architecture so that it becomes desirable to the general public? "Designing" and "planning" are good, useful words but they need the help of some colorful descriptive language to make architectural service seem alive, vital, and necessary. Certainly the name "architect" should not be abandoned, but it needs new and colorful words about it. It is old and scholarly, somewhat shelf-worn, dulled by academic connotations. To many people it suggests an aloof functionary, an aristocratic professional beyond the reach of ordinary folk.

If you get the words to describe what the architect can do for the construction industry in terms which the ordinary citizen can understand and appreciate, you will probably have the key to what the architectural profession should do to increase its influence and improve its economic situation.

If you can make architectural service mean "save money" to every prospective building owner, the place of the architect is going to take care of itself.

If you can make it mean "You don't have to worry about what's under the surface; your architect safeguards your investment," you'll have something which people will want and get.

The industrial designers may be a bit sick of the term "streamlining," but it did great things for them. It was graphic, colorful; it took shape in the minds of everybody who heard it. It was an important contributor to the glamour which has been built up about industrial designing.

Architecture is the most glamorous profession of all. But it needs graphic, colorful words to give it sales appeal. And they must be practical words which are easily thought of as meaning real, substantial advantages to the prospective client.

This business of language is so much more important than we are wont to think. Action is generated by language, and the kind of action is conditioned by the force and power of the words which are the incitement. To illustrate, it is worthy of thought that the language of the Nazis dominates this total war they have created. The world is making war in their language. We are all using "panzer," "blitzkrieg" and "luftwaffe." Maybe the democracies had better get a language of their own, the language of democratic victory. Maybe when they get the action which leads to final victory, the language of that victory will take command.

But action follows good action words. And in all our relationships we should see that we have a language which talks to other people with persuasive meanings. Perhaps the schools of architecture might make a modern exercise of thinking about the language of the profession in terms of what the world demands today.

What are these schools of architecture doing? Are they orienting young men to take their places in a profession which has much to do with business, which must have much of business about it? Are they fitting young men psychologically to cope with the standardized mass production industry which building has become or is rapidly becoming today? This author doesn't know. He is asking because it seems like a question very pertinent to any discussion of the architect and his public. You can easily do for men starting out in a profession what becomes very difficult for older men to do for themselves.

Most professional men in middle and later life are living in a world which has fooled

them badly. What they planned for themselves no longer exists or has turned into something very different.

And Hitler didn't do it all. What he has done we can't yet calculate.

But we do know that mass production and standardization made over the building industry, along with a lot of other industries, and in the process left some very good architects seemingly benched and stranded. Big houses went begging. Little houses came along. Neither plans nor fees fitted. Lately the government has begun to write the specifications. Again it looks a little like joining a bureau or risking starvation. Priorities for defense building have now thrown a halter over all private construction.

All these external circumstances can't be changed, at least not suddenly. But the old political rule holds: If you can't lick 'em, join 'em. At least, get along with them. "Survival of the fittest" probably means that those survive who are able to fit themselves into their times and environment.

Public relations offer a method and technique of doing the fitting in, of making adjustment to the times and the environment. As much as anything, public relations is a way of thinking; that is the beginning of acting. Such thinking is being stimulated by PENCIL POINTS' Public Relations Department and by such an excellent article as that by *Hal Burnett* in last month's issue. Public relations action, however, must be on a wide and general scale, and it must be persisted in if it is to save the architectural profession for ultimate usefulness.

And while excellent things evidently are being done locally by A.I.A. chapters and independent groups, there is need for a coordinated national effort to publicize architects and their function in terms which will have practical meaning for the whole public. Architects should take command of the thinking which is going into modern building. To do so, they must dramatize their function on a national scale. Maybe the profession needs something like a national trade association, organized for promotion of business relationships. Such would not need to cross up the A.I.A., which has been pretty exclusive, but has nevertheless maintained and protected the standards of the profession. Industries in the construction field are ready and willing to cooperate much more effectively and actively with architects than they are now doing.

It's possible that industrial concerns might give the architects some very effective cooperation on control of the old sore spot of wholesale plans, if the architects offered the right machinery for national action. The soundest way for the architect to control the plan nuisance is for him to make his function of supervision, of putting plans into effect, so practical and generally appealing that the public will realize that it isn't protected unless it has the professional oversight of an architect. Probably the wholesale distribution of stock plans would not have developed if the architectural profession had been promoting its function properly instead of merely resting on its professional dignity.

There is no use exhausting energy fighting a popular trend. It must be met instead of resisted. And for the architectural profession to meet the popular trend toward low-cost residence building and modern factory and commercial construction, it may have to make some very drastic changes in its own mode of operation. The fee system may have to be radically changed. Certainly service will have to be sold in terms of usefulness to the builder of modest homes.

The profession should get ahead of the trend. It should be willing to meet any demand short of the sacrifice of professional integrity. And that will never be called for, because integrity must be at the very core of any practical service which is sold to protect the owner of new construction.

Mr. Burnett is certainly quite right in recommending that surveys should be made by competent men to find out the true nature of public criticism of architects and what it is that the public demands from architects. Again this is going to call for national leadership on a business basis. There must be national leadership, national pace-setting, and national education. Our thinking is too much standardized by modern country-wide means of communication for it to be ultimately effective for sectional professional movements to limp along on their own.

Will the architect support such a cause? Will he tighten up his organization for the long haul? And it will be a long haul; you can't effect any major change in the thinking of the public in any short period.

Each locality can do much for itself. Publicity, speechmaking, classes for the public, all these things and others can be promoted to good effect by competent, trained people on the spot. But construction is a national issue today, and local efforts will have to focus nationally if the public, including government agencies, is brought to make proper, adequate use of the knowledge and equipment of the American architect.

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Next to the man himself, the pencil plays the biggest part in creating drawings from which clear blueprints come. If there is magic in this, call it "Eldorado" magic.

The drawing forecasts the blueprint, as in some magic crystal!

Great drawing pencils come in 17 degrees of hardness of lead,—so does *Typhonite* "Eldorado." But no other drawing pencil has *Typhonite* leads. *Typhonite* is created in a literal whirlwind from natural graphite. There is no stopping the whirlwind and there is no stopping Dixon *Typhonite* "Eldorado" as it whirls along far in the lead.

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HERE, THERE, THIS & THAT

POTOMAC PATTER

"Double, double toil and trouble; Fire burn and cauldron bubble."

MACBETH, ACT IV, SCENE I

Let witches chant and good men rant but the ingredients necessary to make the architectural pot bring forth something better than dishwater soup is not to be. It isn't even a fine "kettle of fish." Nor a mess of stew. It's just a mess and no amount of witchcraft will stay the hand of disaster. The private practitioners hereabouts, and everywhere else for that matter, are seriously affected by the recent Supply Priorities and Allocations Board decision regarding the use of "critical" building materials for "nonessential" building. Whether this is good or bad, so far as this community is concerned, is beside the point. At present we are definitely incapable of housing our enlarged personnel, and many constructors are willing to risk future values on housing and business structures; *but,* they are tied hand and foot in any effort to build. Consequently the architect suffers. Oddly enough, this applies to some government agencies as well, for the SPAB has decreed that Post Offices, highways, river and harbor and flood control developments constitute non-defense construction. What happens now in Public Building Administration — regularly charged with the design and construction of our Post Office Buildings and other Federal structures, no doubt considered non-defense? With some three hundred architects on the staff, can enough defense jobs be obtained to provide employment for this large group? Its recently completed defense housing program was carried on in conjunction with other non-defense work. Now SPAB unhitches the rest of the load.

However, our information is that about $60,000,000 for needed auxilliary buildings at or around our Army camps is about to be allocated to PBA (Cheers); but it is not certain that all the drawings will be made by PBA (Uncheers). Private architects may be called in to help (Louder Cheers). This, however, may depend upon required speed, or to what extent the PBA is sabotaged.

Can it be that certain PBA "temporaries" were offered "permanent" jobs by other government agencies, and that in order to induce them to "stay put" counter-offers in the form of increased salaries were made? Could be. These lads, possessing the hidden asset of a Civil Service rating, can hardly be blamed for their advantageous position — AT THIS TIME. Of course, the gamble on which job will last longer is theirs.

We had the extreme pleasure of running across a couple of former Procurementers. *Lloyd Westbrook* recently returned from Connecticut where paying private practice apparently petered out, and *Alfred M. Marks,* down from Pittsburgh on business. The old "F" building was their unpleasant work place but I assure you gentlemen our new temporary emergency buildings are much better. At least, beaver board gave way to "Transite" or equal, and the steam lines have been provided with wheezeless, snoreless, and non-claptrap valves.

Without benefit of fanfare, prospectus, salesmanship, stocks, or bonds, a new architectural organization recently came into being. Paradoxically, architectural is and is not the proper adjective. For its membership is composed of architects, engineers, specification writers, mechanical engineers, building superintendents, landscapers, administrators, and clerks. In short, all members of at least five years standing in the old Office of the Supervising Architect were eligible to join. Since it is the group within, "architectural" cannot be denied. It was logical from more than one viewpoint to select the name of Old Settlers Association (OSA) for the organization. Its initials also apply to the Office of the Supervising Architect; the Old Settlers terminology is good because no permanent Civil Service employees were taken on since early 1931. Shortly thereafter the old and well-known OSA practically lost its identity when it was removed from the direct jurisdiction of the Treasury department. The Old Settlers have a very warm and personal feeling for what that OSA was and stood for. No man was ever held in higher esteem than the late *James A. Wetmore,* who, though a lawyer, was truly a guiding light for this government architectural unit. Following him as Supervising Architect came *Louis A. Simon,* who is at present the greatest character both as an architect and person ever to serve his government, and whose lifetime of work for the OSA and the present PBA will remain a constant source of inspiration to all government architects. The Old Settlers, as in-

(*Continued on page 54*)

The Office of The Quartermaster General has adapted the functional layout of the original Ely Jacques Kahn plans to develop its own standard plans and specifications for seven types of USO Recreation Centers. The majority of the buildings will be built from these standard plans. A few structures will be built from local plans prepared by architects residing near the sites of the projects. In some cases, existing buildings are to be purchased or rented, and alterations undertaken. And 240 units will be in full operation by Christmas! Six of the seven types are of frame construction, while the seventh is built of brick and steel.

USG NEWS-FACTS

FIRE SAFETY EDITION

November 1941 Vol. 1 No. 11

Published by the UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago

SHEETROCK CONFINES FIRE THAT MELTED BRASS FIXTURES

DALY CITY MUNICIPAL WATER WORKS
DALY CITY, CALIFORNIA

Feb. 4, 1941

U. S. Gypsum Co.
2501 Harrison Street
San Francisco, California

Dear Sirs: Attention: Mr. R. A. Hartley

On Sunday, Jan. 26, 1941, at 7:15 A.M., Daly City had one of the strongest fires I have ever witnessed in my thirty years of fire service.

We were called to 169 Moltke Street to find a six room frame building that had been burning for some time and was a complete furnace with all the furniture, rugs and hardwood flooring burnt to a crisp in four rooms. After dropping five children from a rear window, we used two streams of water with 120 pound pressure from 2½" lines, and in our inspection after the fire was out, we found aluminum pots, glassware and brass chandeliers melted in solid chunks.

This fire would have been a real disaster, if most other wall materials were used in this building, but the fire was confined to the front four rooms that were covered with ½" recessed edge Sheetrock, made by the U. S. Gypsum Co.

After removing all damaged Sheetrock from walls and ceilings, we found all studs and rafters in perfect condition and not even charred or smoked up as this material kept the flames from spreading to the attic.

I will recommend Sheetrock in home construction as a fire retarding material from now on.

Very truly yours,

A. J. Bodien

A. J. Bodien
Asst. Fire Chief &
Chief Building Inspector

AJB:ad

The picture and the reproduction of the letter tell their own story. Notice that the studs are not even discolored by smoke and are not in any case charred by flames. The fire which melted aluminum, glass and brass into solid chunks was effectively stopped by the ½" Sheetrock.

Bureau Head Stresses Fire-Resistive Materials

LYMAN J. BRIGGS, the Director of the National Bureau of Standards, has made a statement which summarizes the importance of fire resistive materials in reducing damage from fire. Mr. Briggs says:

"Even within an area for which no legal requirements for fire subdivision apply, the *use of materials* that will contribute a minimum to the severity of the fire and in some degree present a barrier to its spread, is an effective means of fire control.

"In fire-resistive buildings the fire can be prevented from spreading beyond the area in which it originated. In non-fire-resistive buildings the progress of fire can be greatly retarded."

GOOD CONSTRUCTION REDUCES FIRE LOSS

The NBFU has estimated the fire loss in 1939 for dwelling occupancies at 92 million dollars. The total estimated fire loss for all occupancies for 1939 has been placed at 275 million dollars. By the application of proper safeguards the annual fire loss could probably be cut in half.

The fact that fires frequently destroy human life as well as property makes the problem of fire safety doubly important. The U. S. Census Bureau records for 1938 show 7,145 fatalities designated as conflagration deaths.

The first phase of the problem is to prevent the fire from starting—a condition that is beyond the control of the architect except where poor construction (such as defective chimneys) is the contributing cause. The prevention of carelessness by the building occupants has no architectural aspect.

The second phase is to minimize the resulting loss when a fire has broken out. This involves the use of suitable materials and methods of construction which will confine the fire insofar as possible to the point of origin. To keep fire damage to a minimum may also connote the use of fire fighting apparatus as a part of the building equipment in the form of extinguishers, sprinklers, alarms, etc.

Architectural alertness to sound design has, without doubt, prevented the annual loss from being any larger than it is. Good building construction and the use of fire-resistive materials are encouraged by architects, who are responsible for about 70% of the Nation's building. Without the profession's expert knowledge and insistence on quality, the annual fire loss would be many millions of dollars larger.

A fireproof material in a home should do two things, (1) prevent the spread of fire, and (2) prevent damage to the structural supports so that the building will not collapse. To do this, a material must have the following properties:

1. It must not burn—it should not add fuel to the flame.

2. The material must not pass temperatures sufficiently high to set fire to materials on the other side.

3. The material must not expand sufficiently under the fire heat to wreck itself, or its support.

4. These first three should be maintained for the greatest possible time.

Gypsum won't burn; the surface away from the fire stays cool; it does not expand appreciably under heat. Gypsum does all of these things for a considerable period of time. It has great strength; it is easy to apply; it gives rigidity and solidity to the building.

In addition to high fire resistance gypsum products have many other qualities unique to fire-resistive materials. Rocklath, Sheetrock and Gyplap are quickly applied, light in weight, strong, inert, and economical.

Gypsum plaster is not only fireproof but dries rapidly, is adaptable to all types of decoration ordinarily used on plastered surfaces, uniform in quality, and has the plasticity necessary to ease the plasterer's work.

Red Top Insulating Wool is made of incombustible Fibreglas fibers, has great strength and uniformity, eliminates drafts in the framing spaces of wood buildings, and provides both a highly efficient insulation and an effective means of preventing the spread of fire.

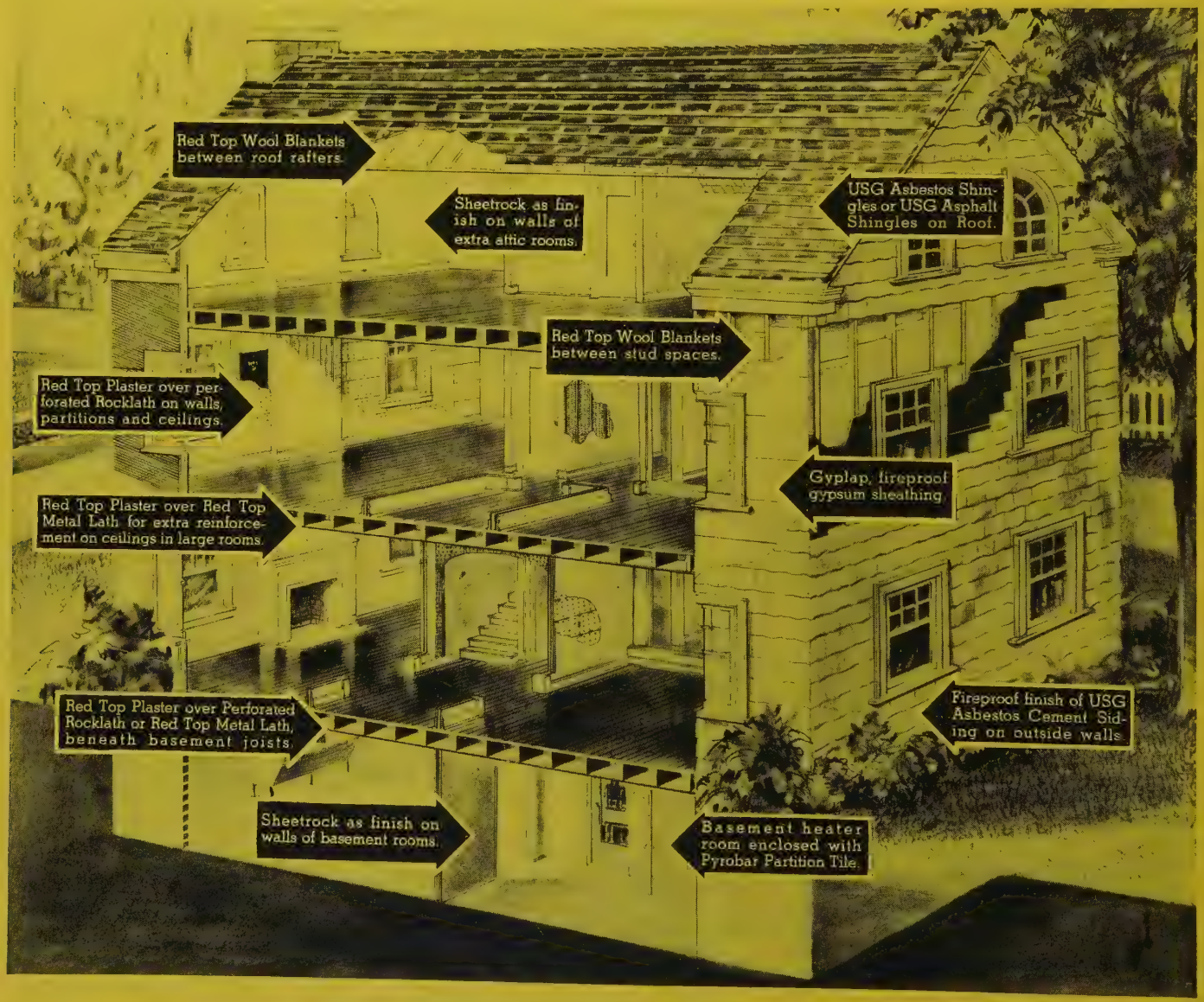
USG asbestos cement roof shingles and sidings minimize the hazard of fire from exposure. Flying sparks or brands cannot ignite these low maintenance materials. Oriental stucco offers another exterior finish material with unlimited design possibilities combined with fire safety.

USG acoustic materials—Acoustone, Perfatone and Sabinite are incombustible.

Origin of Dwelling Fires in New York City

Areaways, porches, roofs, etc.	11.3%
Airshafts	0.2%
Attics	1.1%
Awnings	2.7%
Bathrooms and toilets	0.8%
Bedrooms	10.1%
Boiler and furnace rooms	2.2%
Cellars	16.3%
Chimney fires	2.3%
Closets	4.2%
Defective flues	5.3%
Dining rooms	5.5%
Dumbwaiter and elevator shafts	0.5%
Hallways and corridors	2.5%
Kitchens	13.4%
Parlors	7.5%
Partitions, under floors, etc.	1.1%
Storerooms	0.7%
Stoves	10.5%
Vacant floors	1.4%
Miscellaneous	0.4%
Total	*100.0%*

WHERE USG MATERIALS PROTECT AGAINST FIRE


Red Top Wool Blankets between roof rafters.
Sheetrock as finish on walls of extra attic rooms.
USG Asbestos Shingles or USG Asphalt Shingles on Roof.
Red Top Wool Blankets between stud spaces.
Red Top Plaster over perforated Rocklath on walls, partitions and ceilings.
Gyplap, fireproof gypsum sheathing.
Red Top Plaster over Red Top Metal Lath for extra reinforcement on ceilings in large rooms.
Red Top Plaster over Perforated Rocklath or Red Top Metal Lath, beneath basement joists.
Fireproof finish of USG Asbestos Cement Siding on outside walls.
Sheetrock as finish on walls of basement rooms.
Basement heater room enclosed with Pyrobar Partition Tile.

The National Fire Protection Association say that in some states the greatest number of fires from any single cause is attributed to "sparks on roof," illustrating the need of fire retardant roof coverings for dwellings.

At the left is shown a roof of USG Thick Butt textured asphalt shingles. The deep shadows and graining give a dependable rugged appearance in addition to providing fire safety. USG asbestos cement shingles provide even higher fire resistance, freedom from maintenance costs, reduced insurance rates and attractive appearance.

In the picture above is shown a fire which occurred in East Meadow, Long Island, New York, in December, 1935. Note the furious burning of wooden shingle walls—and lack of flame on the asphalt shingle roof.

Side walls may also ignite from exposure unless of non-inflammable material. USG asbestos cement siding or Oriental stucco provide fire-safe exterior wall finish.

The following check list covers most of the elements of dwelling construction which prevent the starting of a fire or which tend to confine it to its point of origin.

CHIMNEYS
- —4" brick or concrete
- —8" hollow tile
- —12" stone
- —flue lining
- —2" clear to any wood
- —flanged pipe collars
- —cleanouts

ATTACHED GARAGE
- —single opening, automatic closing fire door, sill 12" above floor
- —1-hour fireproof isolation from house
- —fume vent

BOILER ROOM
- —fireproof isolation from house
- —proper fuel storage
- —15" minimum clearance from boiler
- —fire door, automatic closing
- —3'-0" clearance around heater
- —masonry piers or protected columns
- —protect beams and girders
- —smoke pipe clearance and thimble

ROOM WALLS AND CEILINGS
- —fire resistant throughout dwelling

UNOCCUPIED SPACES
- —fire resistant walls and ceilings

FIRE-STOPS (also act as ratproofing)
- —stud spaces
- —furred walls
- —partitions
- —wainscoting
- —stairs
- —shafts
- —around ducts
- —chases
- —between chimney and framing
- —sliding door pockets
- —sills and plates
- —pipe holes

ROOFS
- —lightning arrester on aerial
- —roofing material incombustible or fire resistant
- —incombustible insulation
- —lightning rods

EXTERIOR WALLS
- —incombustible exterior finish
- —incombustible sheathing
- —incombustible insulation

ELECTRICAL WORK
- —follow National Electric Code

FIRE FIGHTING EQUIPMENT
- —provide ladder
- —hand extinguishers
- —sprinklers
- —fire pails
- —fire hose and water under pressure
- —fire alarms

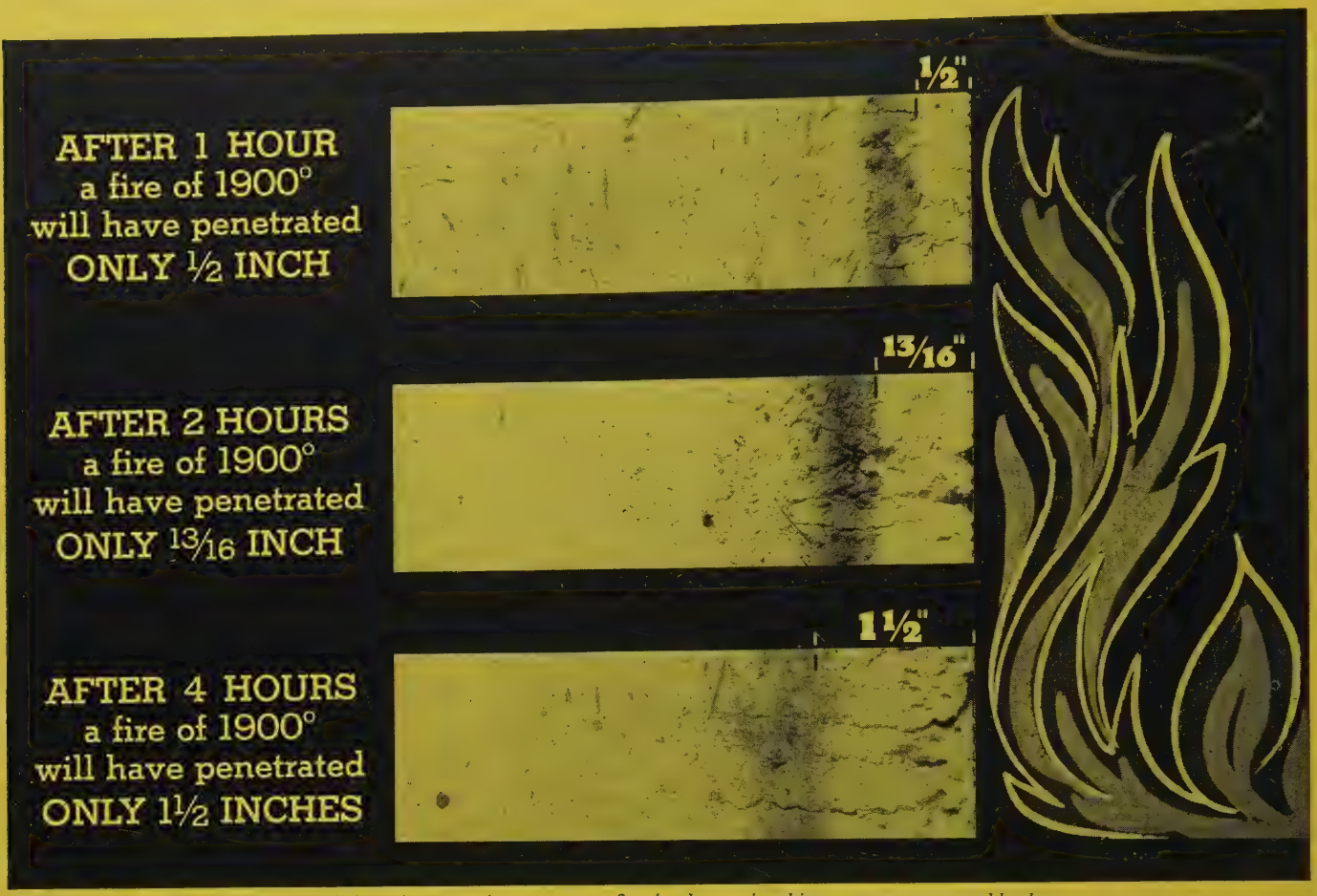
FIREPLACE
- —spark screen
- —20" hearth
- —fire brick lining

FABRICS (Borax and Boric Acid treatments)
- —awnings
- —draperies

LOCATION OF BUILDING
- —prevailing wind carries sparks
- —far as possible from other structures

WARM AIR PIPES
- —3" clearance to protected ceilings for horizontal pipes
- —5'-10" minimum run from furnace to partition
- —cold air ducts incombustible for 3'-0" from furnace

GAS PIPES
- —follow NFPA recommendation



The high resistance of gypsum to fire is shown in this test on gypsum block.

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ACOUSTIC MATERIALS. Tile, metal tile, board, and plaster products for controlling reverberation and quieting sound.

INTERIOR PLASTER AND STUCCO. Fifty varieties including the famous Red Top Plaster, for every building need.

MASON'S AND FINISHING LIME. Quick or Hydrated.

PAINT. New Principle interior paints which are quick drying, light reflecting, free from objectionable odor, cleanable. They have high coverage and high opacity. Also primer and cold water paints and paints for exterior and interior masonry surfaces.

PLASTER BASES. A complete line of standard metal laths, gypsum lath, insulation board lath, metal accessories and light weight economical Pyrobar gypsum partition tile.

ROOFS, FLOORS AND PARTITIONS. Pre-cast and poured gypsum slabs, and ribbed steel decks for roofs and floors. Gypsum block for partitions and fireproofing.

SHEATHING. An insulating board type and Gyplap the fireproof gypsum board sheathing.

SHEETROCK. Fireproof Gypsum panel material for dry wall construction to receive paint, wall paper or any other decoration. Also available predecorated to reproduce wood grain.

SHINGLES. Asphalt and asbestos cement shingles in a variety of styles and colors.

SIDING. Asbestos cement siding in a variety of colors, also with self-cleaning Glatex surface.

THERMAL INSULATION. Board, blanket, loose fill and reflective types.

TRUSSTEEL STUDS. A system of light weight hollow steel partition framing, for speedy erection and non-inflammability.

USG PLASTERING SYSTEMS. Construction methods for applying Rocklath or Metal Lath to wood frame, steel or masonry, to reduce sound transmission and to minimize plaster cracks and joist streaking.

WEATHERWOOD. A panel material combining construction, insulation and sound deadening with interior finish.

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300 West Adams St., Chicago, Ill.

USG

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RAMONA VILLAGE

(LOS ANGELES)

it's NATIONAL PIPE again...in one of the country's large housing projects

More than 100 tons of **NATIONAL PIPE** *installed in the 610 dwelling units of this new low-rent housing project.*

IT'S no accident that NATIONAL Steel Pipe has been chosen for a large majority of America's big scale housing projects. Architects and plumbing and heating contractors have long recognized the fact—that for general all-round building purposes, NATIONAL Steel Pipe gives the greatest service for the least investment. Owners can depend on the efficient, trouble-free operation of their piping systems when NATIONAL is on the job. Workmen tell us they like to work with NATIONAL Pipe because it's easy to install, profitable to use. It's clean, inside and out, strong and ductile, and uniform in every property. Bends, cuts and threads with ease.

NATIONAL quality never varies—NATIONAL Steel Pipe is always the same—no other pipe has been able to offer greater value in strength, durability and ease of installation at low cost. Write for data.

RAMONA VILLAGE HOUSING PROJECT CONTAINS 610 DWELLING UNITS... ONE OF THE COUNTRY'S FINEST!

Ramona Village is owned and operated by the Housing Authority of the city of Los Angeles, California. The 110 separate buildings are all two stories in height, and are of five different types, containing four, six and eight families each. The total number of rooms is 2679.

An administration building houses the administrative offices, maintenance shop, club and social room, and day nursery. The dwelling units contain from one to three bedrooms in addition to a living room and kitchen.

The architects for the work are known as the Housing Architects Associated, consisting of: George J. Adams, chief architect; Walter S. Davis, Ralph C. Flewelling, Eugene Weston, Jr., Lewis Eugene Wilson and Lloyd Wright. General contractor, Baruch Corporation. Mechanical engineer, Ralph E. Phillips.

NATIONAL TUBE COMPANY

PITTSBURGH, PA.

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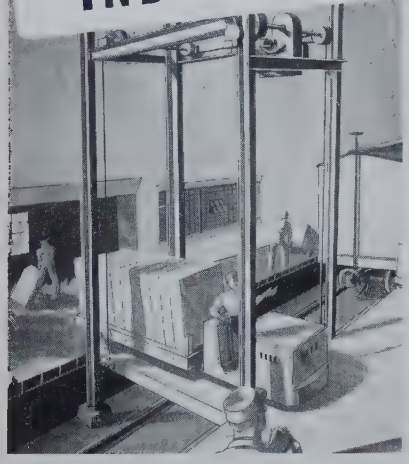
UNITED STATES STEEL

New

MODERN TIME SAVER FOR INDUSTRY



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MONTGOMERY "CROSS-OVER" BRIDGES are designed and built to make possible the faster handling and speeding up of production demanded today by industry. These BRIDGES are used to save time in plants with loading docks separated by railway tracks. They replace cumbersome drawbridges and transfer cars which delay traffic flow and waste many minutes in hauling operations.

It takes only a minute to lower a "CROSS-OVER" BRIDGE after a freight car leaves the dock. The Bridge can be lifted in an equally short time and is completely out of the way. Available in any desired size.

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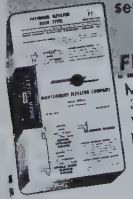
DON GRAF DATA SHEETS on Passenger and Freight Elevators to help you in making original plans. Get your FREE set today!



FILL IN—MAIL TODAY!

MONTGOMERY ELEVATOR CO.
34 20th Street, Moline, Ill.
YES! Please send me details on MONTGOMERY "Cross-Over" Bridges. Also send Don Graf Data Sheets.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen, and Specification Writers

Publications mentioned here are all 8½ x 11 unless otherwise noted, and will be sent free, except as indicated, upon request to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

OFFICE EQUIPMENT — Bulletin No. 33 from Wallace Supplies Mfg. Co., 1310 Diversey Parkway, Chicago, illustrates in color and describes its line of storage cabinets and chrome tubular furniture for the office, reception room, or home.

FENESTRA HOLORIB—Punched for filing in a ring binder is Catalog HOL-1 from the Holorib Division, Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich. In its 12 pages are illustrated Holorib insulated steel roofs, reinforcing forms, Sanacoustic roof units. Engineering data and cross section details are included.

PHOTOGRAPHIC SCREENS—A 48-page catalog, No. 39, on Da-Lite screens and photographic accessories, from Da-Lite Screen Co., Inc., 2723 N. Crawford Ave., Chicago, gives technical data on brightness characteristics, and charts giving figures on picture sizes obtained with various projection lenses. The catalog lists the various screens in the firm's line. New is the Electrol screen, a motor-driven, remotely controlled roll screen. A flick of the switch lowers the screen into correct operating position.

ILG UNIT HEATERS—A presentation of the advantages of unit heaters over radiators and steam coils for heating the "vital zone" where people work, shop, and play, is included in a 36-page catalog, No. 341, (A.I.A. File No. 30-D-11) from Ilg Electric Ventilating Co., 2850 N. Pulaski Road, Chicago. Features of the Ilg construction are fully illustrated and described. Helpful engineering data, including tables, illustrations pointing out the proper location of units in various types of buildings, piping diagrams, etc., are contained in this manual.

EMERGENCY LIGHTING — A four-page folder describes the new emergency light and power units for industrial use made by Electric Storage Battery Co., 19th St. and Allegheny Ave., Philadelphia, Pa.

TURBO-VACUUM COMPRESSORS—A.I.A. File No. 32-G. A 24-page catalog from The Trane Co., LaCrosse, Wis., presents schematic and blue-print type illustrations, as well as performance data on the construction and operating simplicity of its Turbo-Vacuum compressors for large air conditioning installations, and for industrial process work.

Also from the same firm is Bulletin DS361, A.I.A. File No. 32-G, on reciprocating compressors. Roughing-in dimensions, mechanical specifications, and capacity charts are included.

SHINGLE STAINS — A 3½ x 6 booklet from Samuel Cabot, Inc., 141 Milk St., Boston, Mass., on "Stained Houses," describes its bleaching oils, creosote shingle stains, weathering gray stains, and heavy-bodied shingle stains, and shows illustrations of homes in various parts of the country on which the firm's products were used.

Also available are two 3½ x 6 color cards showing the standard shades of both creosote and heavy-bodied types of shingle stain and giving all general information pertaining to their characteristics, qualities, uses, application.

SCHOOL SEATING—"Truth on a Pedestal" is the title of a 16-page catalog on school seating recently issued by Welfare Engineering Co., 42 Madison St., Waukegan, Ill. Feature of the chair is the free interchangeability of seats, backs, top supports, and related structural parts.

Also available from the same firm: "Gimme A Chance," a 4-page folder on Utilitone, a movable pedestal school desk.

BALSAM-WOOL INSULATION —Charts, illustrations, and photographs illustrate the new 20-page Balsam-Wool catalog from the Wood Conversion Co., St. Paul, Minn. Three houses of varying size and design are analyzed for proof of insulation features of Balsam-Wood.

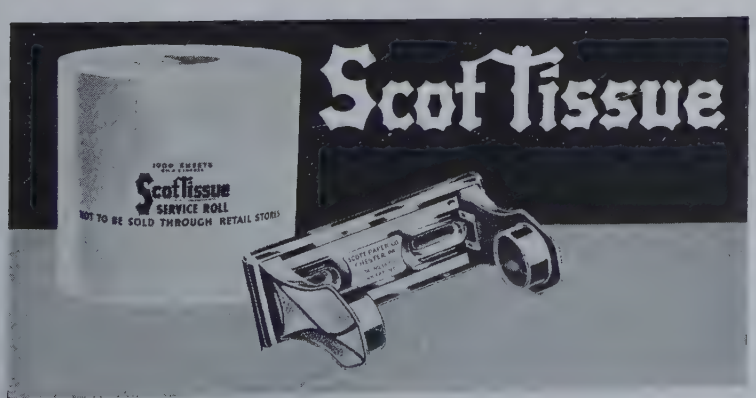
(Continued on page 48)

IT'S IMPORTANT

when three out of four people voluntarily prefer any product you specify

THAT'S exactly the preference expressed for ScotTissue in recent building surveys. 75% of washroom users with a preference named ScotTissue their favorite. This means that *your* clients will appreciate your including this soft, absorbent toilet tissue in your washroom specifications.

And you'll be providing an economical service, for ScotTissue is packaged to be long-lasting. Scott Paper Company, Chester, Pa.



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Office view of new addition to the Frederick Post Co. plant

That others may produce . . On Schedule

Defense begins on the drafting engineer's table. Before a plant can be built, he must plan it. Before a tank can be manned, he must see every tread and trigger on paper. He works *first*—quickly, so that others may produce On Schedule.

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Strictly on schedule under heavier and heavier demands are four important POST developments created to help speed up the output of the busy designer and drafting engineer. These four—*P.T.M., Pencil-tex, Master-repro* and *Vapo-paper*—are particularly suited to the Quality plus Speed requirements of today. Have you asked for samples for testing? Ask your nearest POST dealer or write to The Frederick Post Company, Box 803, Chicago.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46)

BOILER TUBES—A 24-page condensed catalog, Bulletin TB-319, on seamless steel boiler tubes, alloy tubes, and pipe for refinery and process industries, stainless steel tubes and pipe, and seamless steel mechanical tubing, has been issued by Babcock & Wilcox Tube Co., Beaver Falls, Penna. The booklet describes, with photographic and schematic line diagrams, the seamless tube manufacturing process, has descriptions and applications of the firm's stainless steel tubes and pipe, and mechanical tubing.

UNIT HEATERS—A.I.A. File No. 30-C-4. Young Radiator Co., Racine, Wis., presents in this 16-page Catalog No. 2541 its line of Vertiflow unit heaters for industrial plants. Included are tables showing steam capacities for constant speed and variable speed motors, and for low temperature units. Typical wiring diagrams are also included.

STEEL FLOORING, GRATING—A four-page folder from Kerlow Steel Flooring Co., 232 Culver Ave., Jersey City, N. J., gives technical data on its flooring, grating, and safety steps for industrial applications. Specifications, safe load tables, and typical installations are included.

LIGHTING—A reprint from a paper presented at a joint meeting of the A.I.E.E. and the I.E.S. is available from Holophane Co., Inc., 342 Madison Ave., New York. This 12-page report, 6 x 9, titled "Protective Lighting for American Industry," discusses the proper method of lighting industrial plants and areas not only to facilitate production, storage, and shipping, but to protect property, material and facilities.

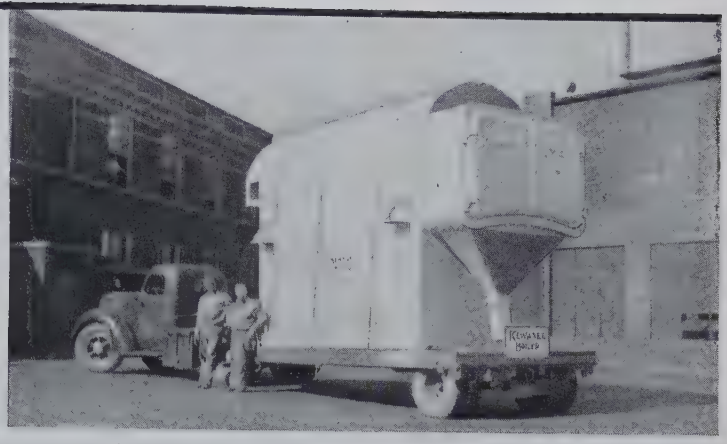
AIR CIRCULATOR—The Hearth-Aire Co., 3126 Scarborough Road, Cleveland, Ohio, has available an 18 x 31 chart which gives directions for installation of its Filt-Aire-Fan air circulator. The chart shows a number of variations possible in the installation of the unit.

Published by the same firm: 22 x 27 detailed sheet showing installation of Hearth-Aire-Place fireplace unit, together with adjoining construction details and chimney location diagrams.

(Continued on page 50)

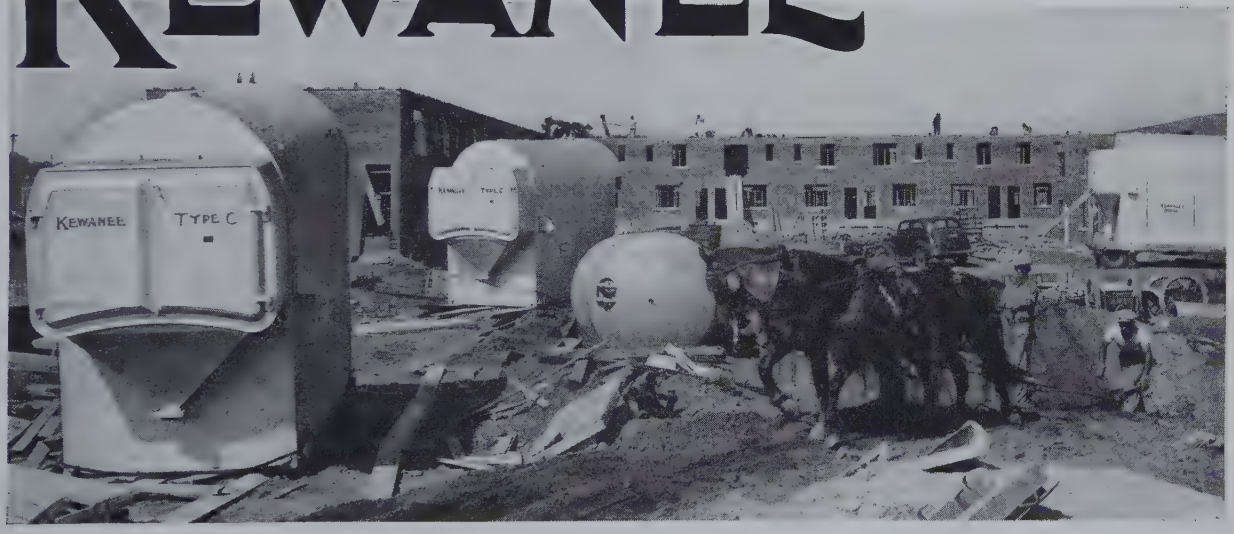
KEWANEE

DEPENDABLE HEAT



A Boiler a day for six days trucked to Col. John Warner and Harrison Homesites twin project of Peoria Housing Authority.

KEWANEE



STEEL BOILERS

Doing the ground work at Harrison Homes with three of six Kewanee's "on the site." While for Col. John Warner Homes the three other 42,500 foot Kewanee's are already "going down" into the boiler room.

In many outstanding housing projects throughout the United States, Kewanee Boilers have been chosen to provide Heat.

Among such works in which Kewanee is proud to be represented are the pair of Housing Projects of Architect J. FLETCHER LANKTON pictured on this page.

The products illustrated herein are normally available for prompt delivery. Our ability to furnish these, as well as the products shown in our catalogues, is subject to the needs of the National Defense Program.

KEWANEE BOILER CORPORATION
KEWANEE, ILLINOIS
division American Radiator & Standard Sanitary Corporation

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 48)

OUTDOOR FIREPLACE DESIGNS—Eight designs for building an outdoor fireplace are contained in a 5½ x 8½, 24-page booklet from The Majestic Co., Huntington, Indiana. Although the booklet carries a published price of 25 cents, it will be mailed to readers upon receipt of 10 cents to cover mailing costs. Typical basic construction detail sections are given.

BUILDING PRODUCTS BULLETIN OF THE PRODUCERS' COUNCIL—Bulletin No. 40, issued by the Producers' Council, Inc., 122 E. 42nd St., New York, from which organization copies may be secured, contains information on building products and services of the following members:

American Lumber & Treating Co., 332 S. Michigan Ave., Chicago—The Wolmanized process of protecting lumber against decay and termites. (A.I.A. File No. 19-A-4).

Bell & Gossett Co., Morton Grove, Ill.—Zoned applications of the Monoflo system of forced water heat for apartment, commercial, and industrial buildings. (A.I.A. File No. 30-C).

Carrier Corp., Syracuse, N. Y.—Grille type outlets for air distribution. (A.I.A. File No. 30-J).

Crane Co., 836 S. Michigan Ave., Chicago, Ill.—Presenting the new Siwelclo and Delmar models of water closets, and the new Duraclay urinal trough. (A.I.A. File No. 29-H). Features of the one-pipe hot water heating system for small homes, available with a Crane No. 14 boiler, are outlined on a separate sheet. (A.I.A. File No. 30-C).

General Electric Co., Bridgeport, Conn. — Announcing a 36-page booklet on the selection of the right operating equipment (heating plants, wiring systems, and kitchen appliances) for residences.

Homasote Co., Trenton, N. J.—Analysis of the Homasote method of precision-built construction. (A.I.A. File No. 19-I).

National Fireproofing Corp., Pittsburgh, Pa.—Masonry wall construction with Natco Dri-Speedwall tile, with special emphasis on low cost industrial, commercial, and multiple housing construction use. (A.I.A. File No. 10-A).

Pullman Mfg. Co., Rochester, N. Y.—Low-cost window construction with Pullman balances. (A.I.A. File No. 27-A).

Richmond Screw Anchor Co., 820 Liberty Ave., Brooklyn, N. Y.—Use of Snap-Tys with spreader washers for monolithic architectural concrete walls. (A.I.A. File No. 4-D-3).

Sedgwick Machine Works, 151 W. 15th St., New York—Hand power dumb waiter equipment for general service. (A.I.A. File No. 33-D).

The Sisalkraft Co., 205 W. Wacker Drive, Chicago, Ill.—Applications of Sisalkraft reinforced, weatherproof building paper in building construction. (A.I.A. File No. 19-G).

The Stanley Works, New Britain, Conn.—A new and improved non-rising and free turning butt pin, which will not rise through the action of the door, is presented in a new folder. (A.I.A. File No. 27-B).

Vermont Marble Co., Proctor, Vermont—The use of marble for toilets and showers. (A.I.A. File No. 22-A-3F.

(Continued on page 52)

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

Women's Residence Hall, Depauw University, Greencastle, Ind. Designed and built by R. E. Schenck, Greencastle, Ind. Calked with Pecora by McFerran-Kane Company, Indianapolis, Ind.

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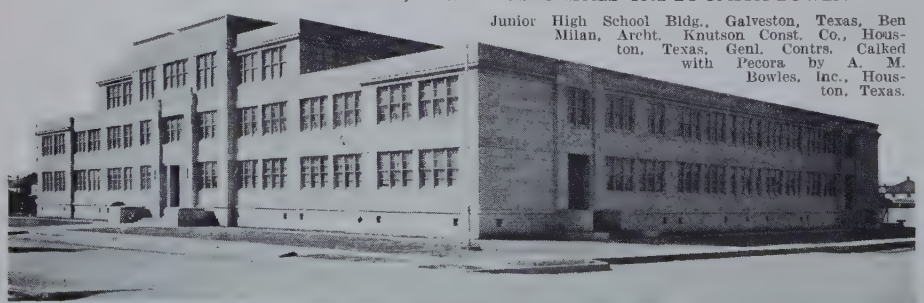

Junior High School Bldg., Galveston, Texas, Ben Milan, Archt. Knutson Const. Co., Houston, Texas, Genl. Contrs. Calked with Pecora by A. M. Bowles, Inc., Houston, Texas.

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NO. 8

ALUMINUM, DEFENSE, AND YOU

OCTOBER WAS A MILESTONE MONTH

There have been three other such milestones for civilian uses of aluminum during the past 18 months.

WHEN, ON MARCH 25, 1940, the price of Alcoa Aluminum ingot was reduced from 20c to 19c a pound, it automatically increased the number of civilian applications where using aluminum would be good cost arithmetic.

19¢

Every application carries its own special set of conditions. They determine how much you can pay to save a pound of weight, to get extra heat conductivity, or reflectivity, or what not. 19-cent ingot widened the circle of aluminum's usefulness.

AUGUST 1, 1940 WAS THE SECOND milestone. Economies growing out of greater volume of manufacture, and economies stemming from continuing research, brought the announcement of 18-cent ingot. The civilian manufacturer looking to his future could see, in the offing, more ways to use aluminum than ever before.

18¢

Perhaps you were one of the thousands who filed away in your book of futures the reminder that "when this thing is over, we must figure on using more Alcoa Aluminum."

THIRD MILESTONE showed up almost before you got that note made. November 18, 1940 saw another reduction on Alcoa Aluminum ingot to 17c a pound, making a total reduction of 15% in the midst of a general seller's market.

17¢

Defense got most of the immediate benefit, but the future of aluminum for you, and you, and you, was writ larger than ever.

THEN CAME 15c INGOT, effective Oct. 1, 1941, with accordant reductions in fabricated forms of Alcoa Aluminum. This means that the arithmetic of weight saving is all new, since last you figured on using this versatile metal in a civilian application. When the emergency is over, the fact is that all your old material cost comparisons will be as dead as a dodo.

15¢

THE ARITHMETIC IS NEW; but the fundamentals just get more so! More than ever, the strong alloys of Alcoa Aluminum are *the* answer to lightness with strength.

ALUMINUM COMPANY OF AMERICA

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 50)

KEWANEE BOILERS—Steel firebox boilers for coal, oil, gas, or stoker firing are described on five single-leaf circulars (A.I.A. File No. 30-C-1) which give in handy, compact form the specifications, tabulations, and diagrams of firebox boilers manufactured by Kewanee Boiler Corp., Kewanee, Ill.

DRAWING PENCILS — "The Right Pencil," a 3½ x 5½ booklet from Koh-I-Noor Pencil Co., Inc., 373 Fourth Ave., New York, describes the Koh-I-Noor line of drawing pencils, materials for drafting room use.

REDWOOD DETAILS — Four loose leaf sheets, punched for filing in a ring binder, are available from California Redwood Association, 405 Montgomery St., San Francisco, Calif. Each sheet gives pictorial and schematic details of various units built with the use of redwood. Included are Terraces and Raised Gardens, Retaining Walls, Lath House and Tool Shed, Garden Materials Storage and Compost Bin. Plans and material lists are included on each sheet.

WALL TILE HANDBOOK—Davidson Enamel Co., Clyde, Ohio, has available a 48-page, 5¼ x 8¼ wall tile handbook which describes the method of installing its Veos porcelain enamel on steel tile. Isometric views and line drawings illustrate various methods and styles of Veos application.

From the same firm: 12-page catalog on Veos porcelain enamel on steel tile, showing before and after views in various types of installations. Included are specifications, installation diagrams, and tile shapes available for all types of installation conditions.

LATH HANGERS — A.I.A. File No. 20-B-3. A single sheet insert, from V-W Co., 214 Oak St., Columbus, Ohio, gives specifications, technical data, drawings of its Nonail lath hanger for gypsum lath. The patented hangers are used for attaching gypsum lath to walls without nails.

UNIT HEATER—A.I.A. File No. 30-D-11, Catalog No. 5-E, from Grinnell Co., Providence, R. I., explains the principle of unit heating for all types of buildings, describes its wide range of applications. Tables give capacities of the firm's Thermolier unit, wiring diagrams. 56 pages.

Also available from the same firm: Catalog No. 9-D, A.I.A. File No. 30-C-21, on adjustable pipe hangers and supports; and Catalog No. 4, A.I.A. File No. 29-B, on cast iron, malleable, steel, and bronze pipe fittings.

FLOORING, ROOF DECKING—Southern Pine Association, Canal Building, New Orleans, La., has issued an 8-page catalog on Southern Pine heavy duty flooring and roof decking for industrial plants, warehouses, store buildings, etc. The catalog discusses moisture content, density, grades of factory flooring and roofing plank, laminated floors, waterproofing, other topics. A table gives insulating efficiencies of various types of flat roofs covered with built-up roofing. Included also are drawings of standard patterns for Southern Pine heavy duty flooring and roofing plank.

(*Courtesy of the Rockefeller Plaza*)

COVERED with ice through the cold winter — ground under whirling wheels of roller skates in spring and fall—scuffled by cafe traffic and dancing feet through the hot summer—that's how they punish this terrazzo floor at Sunken Plaza in Rockefeller Center. Such abuse does not destroy terrazzo's smooth, wear-resisting surface. Isn't this convincing proof that terrazzo needs no pampering and coddling, that terrazzo is a lifetime floor?

But that's not all! Terrazzo lets you design the exact floor that fits the surroundings. Not just a few colors—but any colors. Not just stock designs—but your designs. Hard wearing, long lifed, non-limiting—what more could you ask?

For full information on terrazzo, write for this A. I. A. Terrazzo Kit that tells how and where to use terrazzo. Sent *free* on request.

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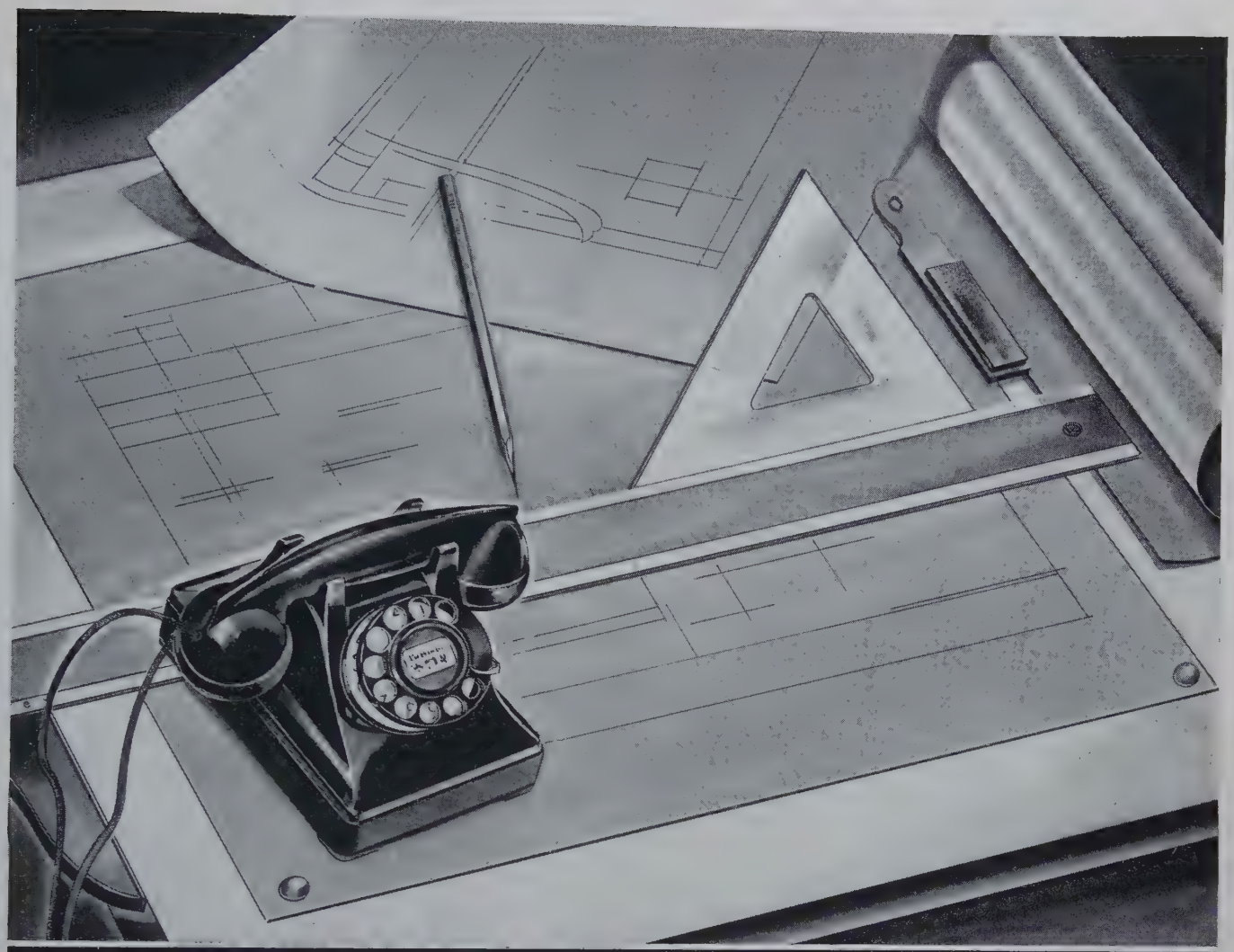

AN EARLY CALL..*may solve your insulation problem!*

THERE is no minimizing the fact that a "cork situation" exists. All of America's cork supply comes from war zones where shipping is uncertain. Available supplies are further limited because since June, Uncle Sam has been building up a stock pile of cork to assure an adequate reserve for defense needs.

Under the circumstances "Insulation business as usual" does not apply to corkboard. Defense needs come first and remaining supplies must be utilized as advantageously as possible. Temporarily, corkboard is not available for roof insulation and for some other uses not concerned with the preservation of perishable food products. But even on work in the perishable food field we have had to ask many old customers and friends to put up with delays and restrictions.

We know these delays can be costly and we are doing everything in our power to reduce them. But our efforts alone are not enough. We need your help too.

You can give us this help by letting us know *early* of your insulation needs. As soon as you begin to think about any insulated construction, protect yourself—pick up your telephone and call us.

Discuss your plans with our insulation specialist—while, or even before, drawings are prepared. He'll have time to offer suggestions which may avoid delays or costly changes later on . . . time to work out your problem in the most effective way. Working together, we will be able to either supply your cork insulation needs promptly, or help to solve your problem with engineering assistance or with suitable substitute materials.

CORK COVERING

Armstrong's Cork Covering is used largely in defense plants or in plants requiring refrigeration to protect perishable foodstuffs. Due to this fact and because the relatively small amount of cork used has not hindered the Government's cork reserve program we can meet most needs for cork covering.

Can we help you now? If so, please call our nearest office or distributor, or write Armstrong Cork Company, Building Materials Div., 919 Concord St. Lancaster, Pennsylvania.

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*Reg. U. S. Pat. Off. O.-C. F. Corp.

(*Continued from page 40*)
dividuals, have felt for many years that in one form or another this association should be. So with final approbation the lads organized the entire office. In spite of the fullness afield, we sincerely hope that some of the old thought-of forms of clubs will become part of the Old Settlers program. We have in mind serious atelier work and a sketch class. *Charles Mason* was elected governor; *George Maddocks,* secretary. *Jacques Abadie* holds the purse-strings, and *F. Warehouse Boettcher* runs the complaint department. Good luck, fellow OSA's. RED

FAECT CONVENTION

Since a large proportion of the membership of the *FAECT* (Federation of Architects, Engineers, Chemists, and Technicians) is employed in the defense industries, the union's recent convention in Detroit, Mich., was devoted to a number of conferences and panels on the subject of the technical man's contribution to national defense. A symposium on the subject of defense production was part of the convention program.

TEXAS CONVENTION

The recently-concluded convention of the Texas Society of Architects was a successful and enthusiastic one, with well-attended meetings, an excellent program, and an effective and intriguing display on a series of panels of architectural exhibits. Discussed were such topics as architects and public works, legislation, education of architects, non-defense contracts during the emergency, other pertinent subjects.

New officers elected were *Wiley G. Clarkson,* Fort Worth, President; *Milton McGinty,* Houston, Vice-President; *Florian Kleinschmidt,* Lubbock, Director; *Bartlett Cocke,* San Antonio, Director; *David Baer,* Austin, Junior Director. Chairman of the general convention committee was *Ralph Bryan,* assisted by the following committee chairmen: *John B. Danna, Thos. D. Broad, Arthur E. Thomas, Howard R. Meyer, John D. Carsey, Everett V. Welch, Vernon E. Shanklin, Maurice Peterman, Roy E. Lane, Herbert M. Tatum.*

ARCHITECTS DISCUSS DEFENSE PROBLEMS

The defense program was the theme of the fourteenth annual convention of the State Association of California Architects, held in Hollywood, Calif., October 9 to 11. Discussions centered about defense projects.

Col. Edwin C. Kelton, U.S.A., discussed airport design. He did not hold out much hope for the architect in private practice to obtain airport design work because of the standardized procedure developed by Army engineers.

The Northern Section of the Association reported that through its paid public relations counsel a great deal of publicity had been received in connection with the activity of the architects in the defense program. The Southern Section reported that its weekly radio program, "Voice of the Architects," had gained national prominence among the public and in the profession. Tangible results of the program were increased commissions to the architect through a more friendly attitude on the part of the public, and a better understanding of the architect's work.

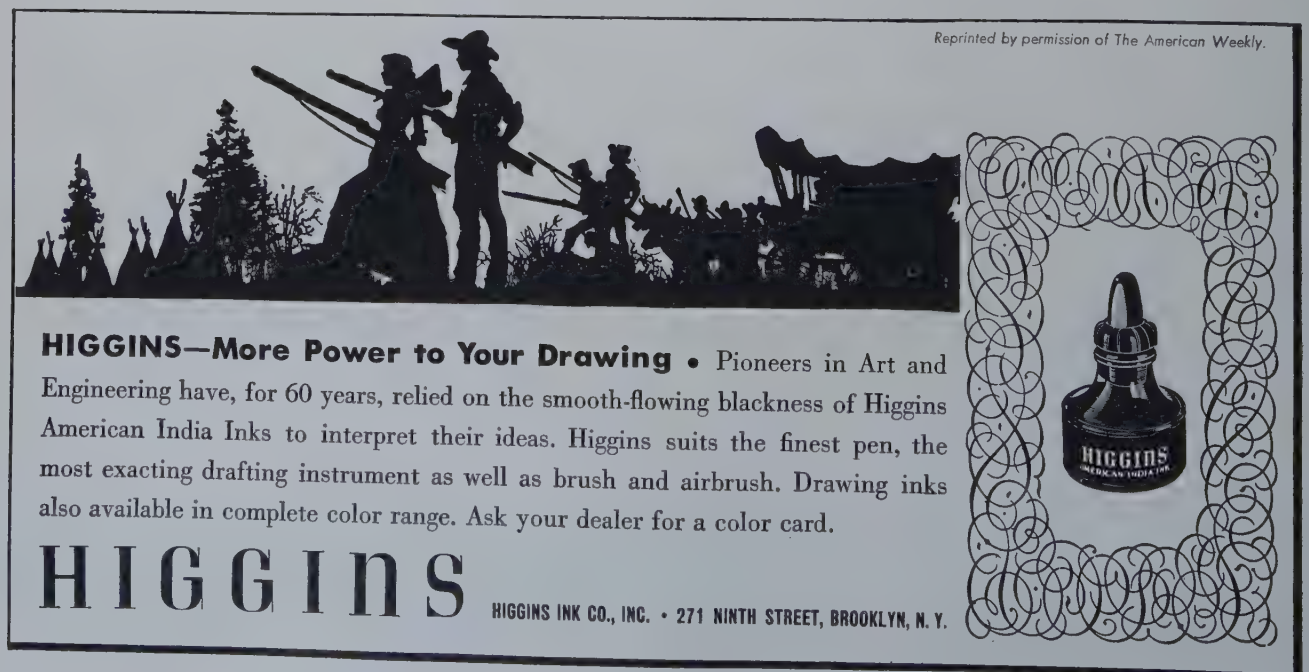
George Moskovics, Promotion Manager of the Pacific Network of CBS, advised the convention to humanize its work and thus bring to the public the benefits of good architecture, sound building. *Allen Herrick,* of the Security-First National Bank, said that since financial institutions had a vital interest in better construction, they were willing to give the architect their fullest cooperation.

Officers elected to head the Association for the coming year are *Wayne S. Hertzka,* San Francisco, President; *Walter R. Hagedohm,* Los Angeles, Vice-President; *Rowland H. Crawford,* Beverly Hills, Secretary; *David H. Horn,* Fresno, Treasurer. General convention chairman was *Merrill W. Baird.*

SYRACUSE CONVENTION

Feature of the fourth annual convention of the New York State Association of Architects, held October 16 to 18 in Syracuse, N. Y., was an exhibition of the outstanding works of members of the association. Convention sessions discussed such pertinent topics as civilian protection, radio publicity, housing trends, specifications, priorities in the building industry, professional practice, cooperation

(*Continued on page 56*)



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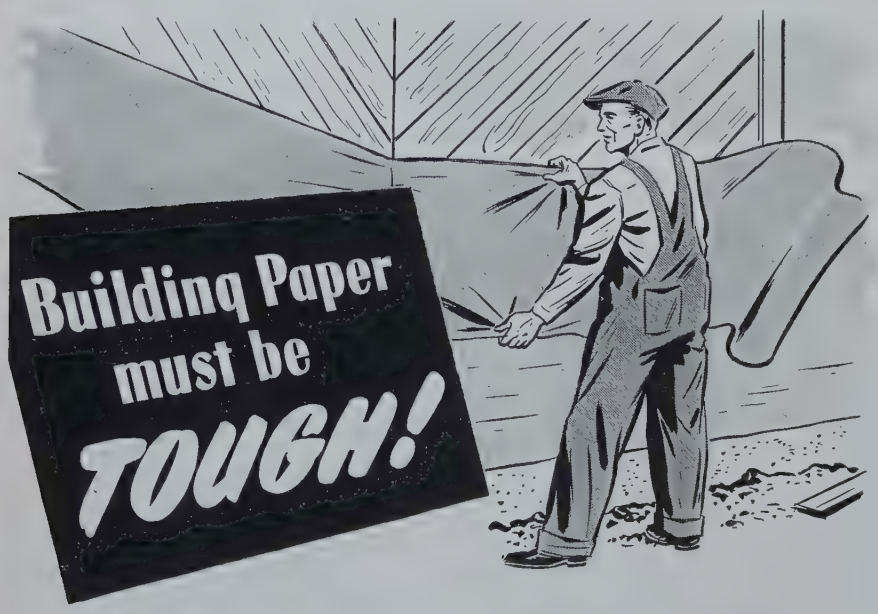
(*Continued from page 54*)

better architectural and engineering professions. Part of the convention proceedings was a forum on services and fees for architects. Chairman of the general convention committee was *L. C. Dillenback.*

A.D.I. CONVENTION

"Design in the National Emergency" was the theme of the national conference of the American Designers' Institute, held in New York, October 3 to 4. Prominent designers, OPM officials, and architects discussed such topics as modern training for the designer, design standards and specifications, civilian defense and the architectural designer. The relation of the designer to the national emergency was discussed from the point of view of the government, industry, and the retail trade.

Jan Juta, of the British Library of Information, discussed the effect the war had upon the creative imagination of British designers as it affected certain materials now controlled for war uses.



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CERAMIC EXHIBIT

A one-man exhibition of modern decorative techniques, in various mediums and techniques, was held recently by *Joep Nicolas,* distinguished Dutch ceramist and painter, at the Orrefors Galleries, New York. The exhibition included terra cotta panels, stained glass windows, examples of mural glass, tempera paintings, oil paintings, and Synresite paintings.

AVERY EXHIBITION

Seven monthly exhibitions will be held in the Avery Architectural Library of Columbia University, New York, during the current academic year. Construction for civilian defense in nations at war, the development of Latin-American architecture, trends in the design of commercial buildings, and contributions to American architectural styles will be some of the subjects scheduled for 1941-42.

JACOBS DESIGN

We regret that in the presentation last month of the various entries in the Mid-River Ventilation Building Competition, sponsored by the New York City Tunnel Authority, the name of *Robert Allan Jacobs,* who collaborated with *Ely Jacques Kahn* in the design of the latter's entry, was inadvertently omitted.

SANDERS TO OPACS

Morris Sanders, New York Architect and Industrial Designer, has been appointed Principal Business Specialist in Construction and Design to the Consumers' Durable Goods Section, Office of Price Administration and Civilian Supply, Washington, D. C.

In his government capacity, Mr. Sanders will be attached to the office of the chief of the section, *Dr. James Bogardus.* His work will be varied, but will be primarily concerned with alternate methods and materials in the field of consumer goods merchandise, with economy and smooth flow of production the first considerations.

KIMBROUGH MEDAL

Hon. Robert Moses, Commissioner of Parks, New York, was recently awarded the J. Lloyd Kimbrough Gold Medal for his achievements in removing the traffic bottlenecks in and around the City of New York. This medal, conceived in commemoration of the first president of the American Institute of Steel Construction, is awarded for outstanding contribution to the steel construction industry, was de-

(*Continued on page 58*)

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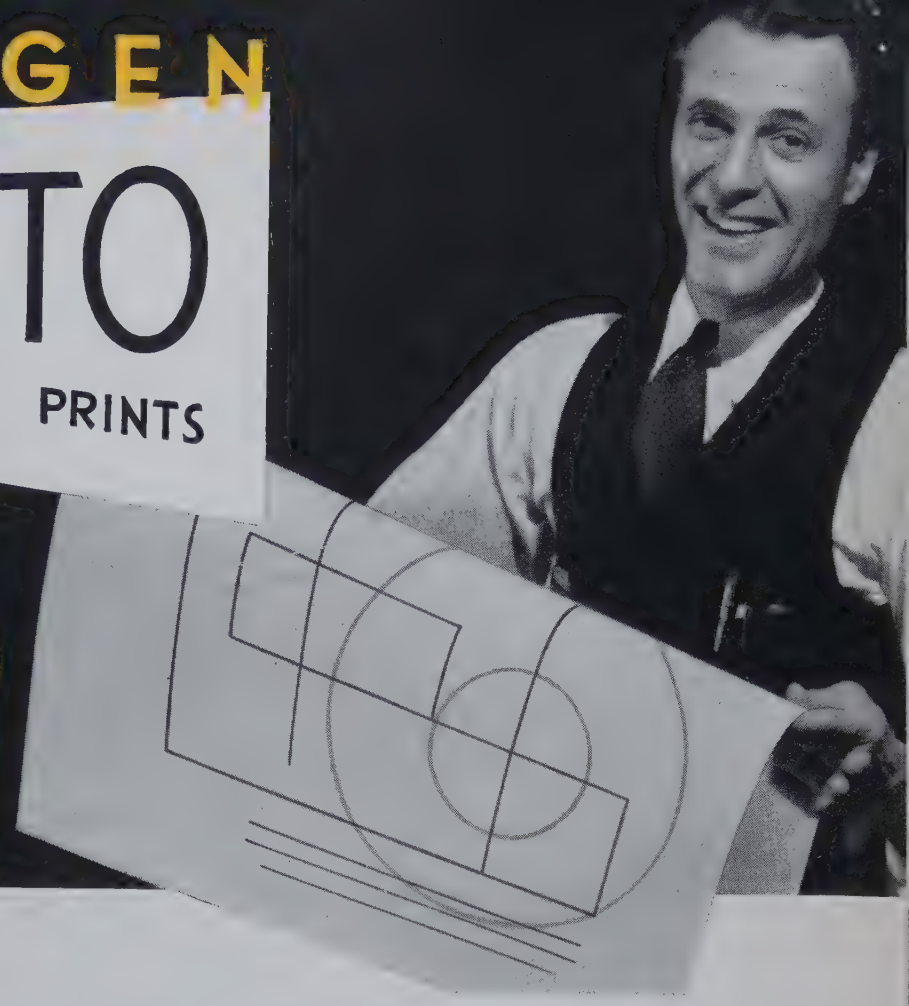

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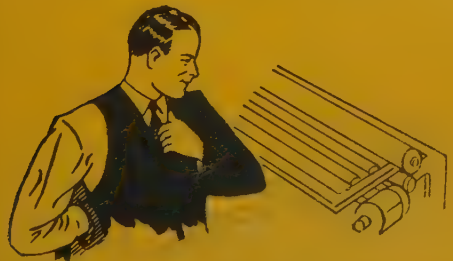

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(Continued from page 56)

signed by *R. Chambellan.* The award was made at the banquet held during the A.I.S.C. convention at White Sulphur Springs, Va., October 14 to 17, and is the first time the medal has ever been awarded.

ELMSLIE ASSOCIATES

In the article printed in the September issue on George Grant Elmslie and the Chicago Scene, there were included illustrations of two schools "done in association with *William S. Hutton,*" and the Sioux City Courthouse "of which William L. Steele and Purcell & Elmslie were associate architects." The accompanying text omitted to identify the two architects involved, beyond mentioning their names. Mr. Elmslie has requested us to add to the record the following information:

Mr. Hutton has practiced architecture in Hammond for many years. He was the architect for the School Board there during the period of years when the schools illustrated were built. When he was commissioned to do the schools shown he arranged with Mr. Elmslie, for whose work he had developed an admiration, to do the design. Although he graciously designated Mr. Elmslie as his associate, it should be clearly stated that the architect of record for the two schools was Mr. Hutton. Since then Mr. Hutton and Mr. Elmslie have become associated, with offices in Chicago.

William L. Steele, of Kimball, Steele and Sandham, Architects, of Omaha, Nebraska, has had a long and notable career in architecture and is a past Vice-President of the A.I.A. When the Sioux City Courthouse commission was awarded to him as architect he associated Purcell & Elmslie with him, thus renewing a working combination begun some years before when both he and Mr. Elmslie were employed in Louis Sullivan's office.

CERAMIC EXHIBITION

The 41st annual exhibition of the New York Society of Ceramic Arts, which opened on October 27th at the Barbizon-Plaza Art Galleries, New York, will run through November 20th. In addition to the usual extensive showing of pottery, the exhibition includes terra cotta and sculpture, tiles, glass, stained glass, enameled metals, other types of ceramic art. Special feature at the exhibition is a collection of ceramics for the garden and terrace.

WINSLOW AT R.P.I.

Professor *Ralph E. Winslow* has been named head of the Department of Architecture at Rensselaer Polytechnic Institute, Troy, N. Y., to succeed Prof. *Ralph Grady Culley,* who resigned to join the University of Florida faculty.

POST-WAR BUILDING

Post-war building activity exceeding in magnitude and importance the present defense construction program is predicted by *Dean Leopold Arnaud,* School of Architecture, Columbia University, in his recent annual report to the president of the University. Plans for rehabilitation must go forward with plans for defense, he stated, pointing out that without a well-planned and well-executed post-war program obsolescence will break down to deterioration of catastrophic proportions.

The architect has occupied a position of importance in the past, Dean Arnaud declared, but his position in the future wil be incalculably greater.

* * *

OBITUARIES

WAINWRIGHT PARISH

Wainwright Parish, a retired architect, formerly a member of the firm of Parish & Schroeder, New York, died on October 1 at his Gladstone, N. J. home, aged seventy-four. Soon after his graduation from Rensselaer Polytechnic Institute, Troy, N. Y., he supervised the construction of the railroad bridge across the Ausable Chasm in the Adirondacks. Later his firm supervised the erection of the West 57th St. Y.M.C.A. building, New York, which contained the longest steel truss up to that time.

GEORGE E. BULFORD, JR.

Stricken with a heart attack, *George E. Bulford, Jr.,* son of George E. Bulford, of Richards, McCarty & Bulford, Architects, Columbus, Ohio, died on August 20 at Ravenna, Ohio, aged forty-five. A graduate of Ohio State University, he worked at one time in the office of *Cass Gilbert,* New York, later returned to Columbus to his father's office. At the time of his death he was associate architect for the Jennings-Lawrence Co. on the U. S. Army Ordnance Depot Project near Ravenna, Ohio.

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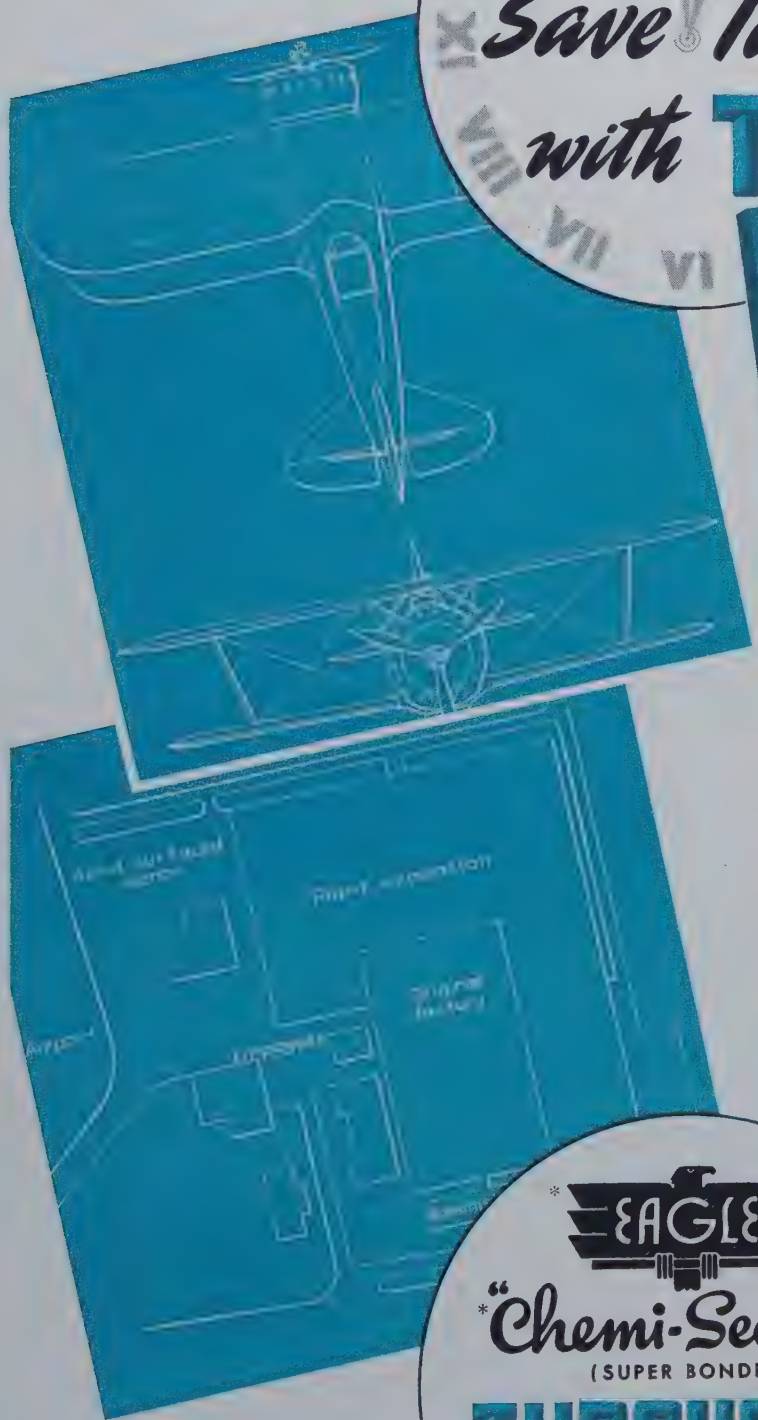

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MANUFACTURERS' DATA WANTED

LLOYD FINCH, *Architect,* C.P.R. Building, Portage and Main Streets, Winnipeg, Canada. (Data for complete A.I.A. file.)

JOHN C. PARKIN, *Student,* 534 Stradbrooke Ave., Winnipeg, Canada. (General literature, samples, and data for complete A.I.A. file.)

THOMSON AND BROWN, *Architects,* 508 Third Ave., Pittsburgh, Pa. (Data for complete A.I.A. file.)

ARCADIUS ZIELINSKI, *Architectural Draftsman,* 364 Grove St., Jersey City, N. J. (Data for complete A.I.A. file.)

H. B. HOLCOMB, *Drafting Instructor,* Mesa Union High School, Mesa, Arizona. (Data for complete A.I.A. file for use in the architectural drafting department of the school.)

PAUL VIRK, *Student and Junior Draftsman,* 50-48—42nd St., Long Island City, N. Y. (Samples of architectural materials, and data for complete A.I.A. file.)

GORDON M. CARLSON, *Junior Architect,* 52 W. 112th St., Chicago, Ill. (Data for complete A.I.A. file.)

E. M. CONOVER, *Director,* Interdenominational Bureau of Architecture, Home Missions Council of North America, 297 Fourth Ave., New York,—a consulting agency for the American Protestant Churches. (Data on materials and equipment that have been found, after testing in use, suitable for church work.)

JAMES S. SHATTUCK, R.A., *Architect,* 100 State St., Albany, N. Y. (Data for complete A.I.A. file.)

JAMES W. MANCUSO, *Architect,* 239 Van Dyke Place, Long Branch, N. J. (Data for complete A.I.A. file.)

WILBUR HENRY ADAMS, *Architect,* 114 W. Seventh St., Erie, Pa. (Data for complete A.I.A. file.)

KARL DeGROOTE, *Chief Draftsman,* Metropolitan Life Insurance Co. Parkchester Development, 67 Metropolitan Oval, New York, N. Y. (Data for complete A.I.A. file.)

J. L. DUNN, Home Planning Department, Wm. Cameron & Co. Inc., Waco, Texas. (Samples and data for complete A.I.A. file.)

EDWIN BURNS MIMS, *Architect,* Box 335, Reidsville, N. C. (Data for complete A.I.A. file.)

Bradley Washfountain installation at Norton Co. plant, Worcester, Mass.

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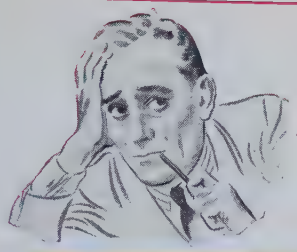
PERSONALS

HENRY MORGAN STEDMAN, *Architect,* has opened an office for the practice of architecture at 535 Ramona St., Palo Alto, Calif.

ALFRED KASTNER and THOMAS HIBBEN have associated themselves for the practice or architecture and engineering at 1621 Connecticut Ave. N. W., Washington, D. C. They have been commissioned by the Government to do some experimental work in earth block and fireproof slab construction in Alexandria, Va.

ANN GOULD, daughter of the late Carl F. Gould, founder of the Department of Architecture at

(*Continued on page 64*)



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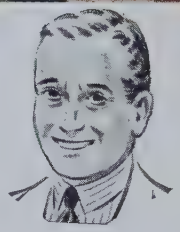

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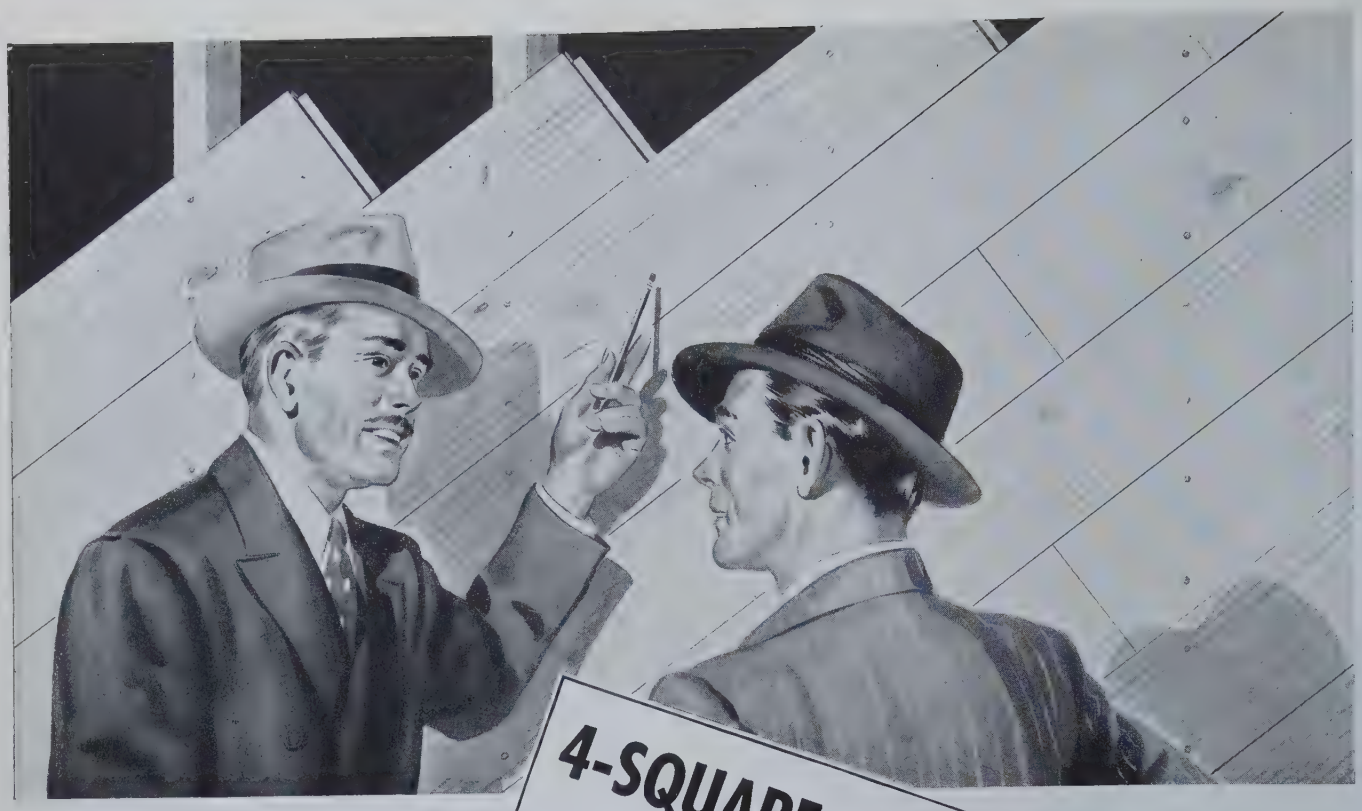

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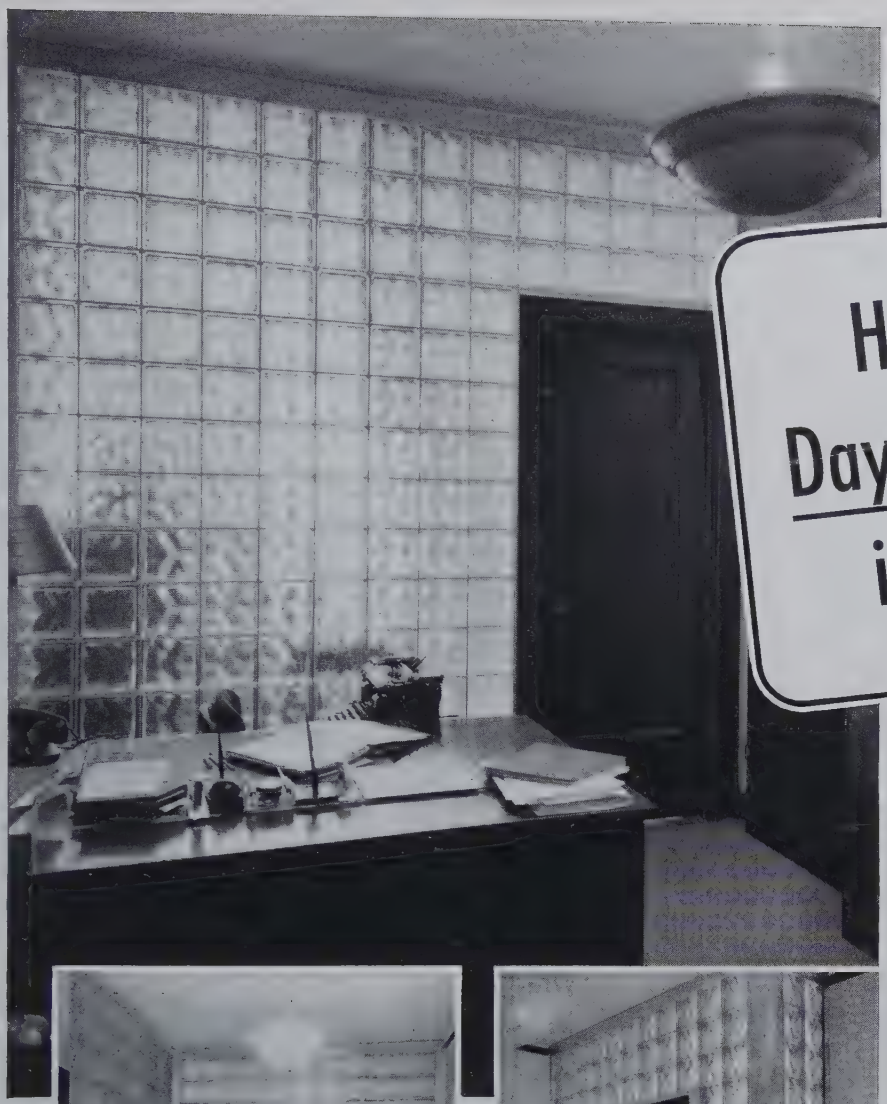

SMART GOOD LOOKS characterize this panel of PC Glass Blocks in one of the Wheeler Kelly Hagny Building suites. But the panel not only pleases the eye. It also brings "borrowed light" into the office to make seeing easier, the room brighter. It is a privacy-preserver of the best type. And it helps to make the room quieter, because of the high insulation value of the blocks.

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(ARCHITECTS: FORSBLOOM & PARKS)

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(Continued from page 60)

the University of Washington, has turned her office in the Skinner Building, Seattle, Wash., over to her partner, Janet MacDonald. Miss Gould, an interior designer, and a junior member of the Washington State Chapter, A.I.A., was married several months ago to John Henry Hauberg, Jr., who is associated with the Weyerhaeuser interests.

JAMES W. MANCUSO, *Architect,* has opened an office for the practice of architecture at his home, 239 Van Dyke Place, Long Branch, N. J.

ADOLPH MERTIN, *Architect,* has moved his offices from 34 West 28th St., New York, to 101 Park Ave.

DANIEL PERRY, *Architect,* has temporarily moved his office from Port Jefferson, N. Y., to "Stonhenge," Bainbridge, N. Y.

EDWIN BURNS MIMS has opened an office for the practice of architecture in Reidsville, N. C.

H. L. LOGAN, Managing Engineer of the Controlens Division, Holophane Co., New York, has accepted an invitation as Consultant to the Industrial Visual Commission of the Public Health Bureau of the American Optometric Association.

PETER S. THOMPSON and PHILIPS B. BROWN, *Registered Architects,* have announced their partnership, under the name of Thomson and Brown, to practice architecture at 508 Third Ave., Pittsburgh, Pa.

FREDERICK MORRIS WELLS and JOHN CARVEL MERRILL have moved their architectural office from 103 Park Ave. to 101 Park Ave., New York.

THE MART

BEATTY & BEATTY, *Landscape Architects,* 728 Seventeenth St., Washington, D. C., want to sell two large drafting boards.

ROSSEL EDWARD MITCHELL, *Architect,* 2630 Adams Mill Road, Washington, D. C., has a number of architectural books for sale at reduced prices. Books in the list include standard design sources for an architect's library.

G. PIERS BROOKFIELD, *Architect,* 10 W. 33rd St., New York, has available an excellent drafting room and private office for an additional tenant. Attractive rental.

D. A. PULONE, *Architect,* 249 Hamilton Ave., Trenton, N. J., will pay cash for a transit. State make, condition, price.

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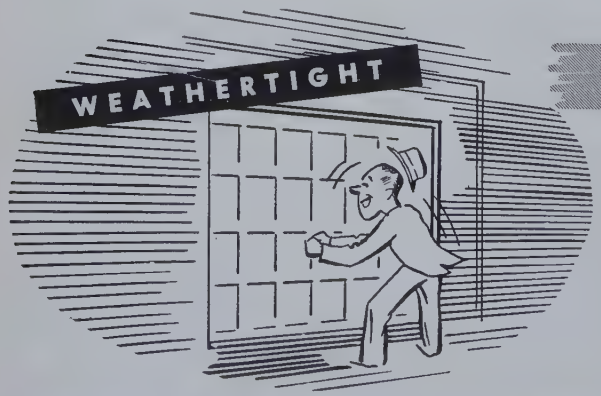

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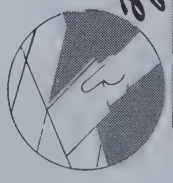

AT LARGE IN THE LIBRARY

FRANK LLOYD WRIGHT ON ARCHITECTURE, SELECTED WRITINGS 1894-1940, *Edited with an introduction by Frederick Gutheim (265 Pages plus the index—Duell, Sloan and Pearce Inc. 270 Madison Ave., New York, $3.50)*

Here in a Red Nine Square volume, that must be opened upon a desk if it is to be read with any comfort, are the chronological outbursts of *the* creative architectural mind: a mind with a theory of design that still wants full explanation; a theory that has been abused, criticized, prostituted, but never truly grasped. For fifty years Frank Lloyd Wright has endeavored to rescue architecture from the archaism of assorted eclectic inspiration. He has preached his own theory of an organic architecture whenever an occasion arose; in a *foreword* to a catalogue of Japanese prints, in a description of the scenic beauties of South Dakota, in criticisms of the published works of contemporary architects.

Students trained at "Taliesin" have gone into private practice but have not succeeded in erection of organic buildings in the true idiom of the master. Could these men have built with the stability of the Imperial Hotel, the spirit of "Falling Water," the utility of the Johnson Administration Building, the integration to the site of "Taliesin West," and the breadth of "Wingspread," then Broadacre City might be a reality. Wright is prepared to be "Architect to the Masses"; what a shame the cross section of Usonia's population has yet to reach that degree of culture which demands organic architecture.

The Wright platform lectures, editorials, and magazine articles as here collected in one volume, give but a facet of his genius.

We must wait for two promised publications from Duell, Sloan & Pearce, *"An Autobiography,"* and Henry-Russell Hitchcock's *"In the Nature of Materials, The Buildings of Frank Lloyd Wright,"* for the fuller appraisal of his Architecture. Unfortunately we must admit a timelessness in many of these writings, for American Architecture has progressed little since his first writings. This book is the most valuable publication about Wright since the January, 1938, *Architectural Forum.* JOHN C. SEWARD

MEDIAEVAL MONUMENTS AT THE CLOISTERS, AS THEY WERE AND AS THEY ARE—*prose story by James J. Rorimer, photographic story by Lincoln, Laura Schnarendorf, Milla, et al. Pages of prose 15, Plates XXVIII. $2.50. For the Metropolitan Museum of Art, by The Plantin Press, N. Y.*

It's good at the present time to have this book. One again realizes the quality of survival possible—that these are *things* that have lasted through the pillage and fires of a thousand years. Cloisters and chapels, doorways and images are shown as the photographer saw them in the Old World; as we see them today reset by American enterprise in the comparative safety of a Hudson River bluff.

The author, James J. Rorimer, is the devoted curator and one of those whose careful planning produced the present building known as The Cloisters, an appropriate, unified ensemble of diverse architectural elements. The problem en-

(*Continued on page 70*)

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THE SKY AND THE SEA—

...AND A FLOOR OF FINE *Terrazzo!*

Florida's alive with lovely colors, but the Hotel Whitman, in Miami has scenery all its own—a floor of TERRAZZO made with Atlas White t.

architect chose wisely when he chose TERRAZZO made with Atlas White d cement. He knew it would repro- y pattern, and reproduce it well. He s fresh and vivid colors would last a . And in addition, he knew upkeep would be practically nil, except for regular cleaning.

Next time *you* plan a floor, plan on FINE TERRAZZO. And just to be sure its colors glow brightly—plan on using Atlas White portland cement. It comes both plain and waterproofed. See Sweet's Building File, Section 11/24 for further details, and 24 full-color illustrations of FINE TERRAZZO. Or write us for free book. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

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This FINE TERRAZZO floor made with Atlas White cement was designed for the Hotel Whitman by Architect Roy F. France, Inc., Miami Beach. Installation by the Venetian Art Marble & Terrazzo Co., Miami. Colors were: Red Champlain Marble; Belgian Black Marble; Yellow Verona Marble; Royal Green Marble.

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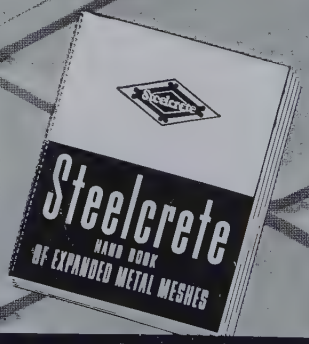

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(*Continued from page 66*)
tailed incorporating functionally and in uncluttered simplicity the Chapter House from Pontaut, the stonework of the choir of the church at Langon, parts of the cloisters of five French monasteries (*Saint-Michel-de-Cuxa, Saint-Guilhem-de-Désert, Bonnefont-en-Comminges, Trie,* and *Froville*), some thirty doorways and windows, and various stained-glass panels. These examples of Romanesque and Gothic architecture and architectural details, together with tapestries, sculpture, furniture, and metal-work, are shown now in unconfused surroundings.

Under such authoritative guidance it is a privilege to examine each item. The Langon choir, for instance, will have fresh interest for readers who have followed its history through service as a stable, a meeting place for the Jacobins during the French Revolution, a dance hall, a moving-picture theater, a government storehouse for tobacco, and a return to dignity at The Cloisters.

Here is a rare book for the front office—if its owner can bear to expose it to thumbprints!

DOUGLAS M. GAME

THE INTENT OF THE ARTIST, *by Augusto Centeno ($2.50, 162 pages — Princeton University Press, Princeton, New Jersey).*

"In this momentous crisis of occidental civilization," writes *Augusto Centeno,* "great care must be taken —culture could become a Maginot Line." This warning metaphor climaxes the introduction to a highly provocative little volume. While defining the title as one of the three dimensions—intent, extent, content—which characterize a work of art, Mr. Centeno cautions against the rigid, outward forms which, unless critically evaluated, might stamp our generation. His introduction supplies an excellent theoretical basis for the artistic criticism he deems so necessary. Beyond that, it is a chatty, general discussion about art and artists, threaded with references to the historical great, tactfully interwoven with quotations by the late *Sherwood Anderson, Thornton Wilder, Roger Sessions,* and *William Lescaze,* each of whom has contributed an essay to the body of the book.

Here the work loses its general nature, and becomes essentially a series of autobiographical outlines of specific intent; there is less about art, much of the artist himself, which, however, will be quite revealing to those already acquainted with these outstanding men. It is worth noting not only that an architect has been included in this group but also that, of the four essays, Mr. Lescaze's is certainly the *most enlightening* for the layman.

Is it Architecture, or is it Art itself, that is coming into its own? I look forward to the time when the Industrial Designer, the Scientist, and the Mathematician will be included in the hierarchy of those who may express opinions on art in general.

ROBERT HENRI MUTRUX

BETTER HOMES FOR BUDGETEERS, *Sketches and plans by Royal Barry Wills (102 Pages Illustrated, $3.00—Architectural Book Publishing Co., Inc., 112 West 46th St., New York)*

The public has come to know Mr. Wills as the leading architect of small modern houses which appear to be inspired by New England colonial. For the present discussion Mr. Wills has established a basic minimum plan, with an itemized cost sheet which totals $3380. This plan is then expanded, a unit at a time with its cost increasing, until a relatively luxurious house is achieved.

A six-page section is devoted to "Dollar Savers." These sketches from his own notebooks of salient points where simplified construction can save money will appeal to the home builder. This is followed by analysis of a minimum specification.

The bulk of the book is devoted to delightful perspectives in charcoal and Chinese white on green paper of seventy-five houses designed by Mr. Wills and his staff, for publication. Each perspective has its plan at 1/16″ scale and a short discussion of its outstanding qualities. These houses are grouped within three definite income brackets. Fortunately Mr. Wills is not selling out the profession in this volume, for the drawings stimulate interest in homes designed by an architect rather than offering plans from which to build. The plans have many good elements though generally lack the study that made Mr. Wills' LIFE House so successful and popular.

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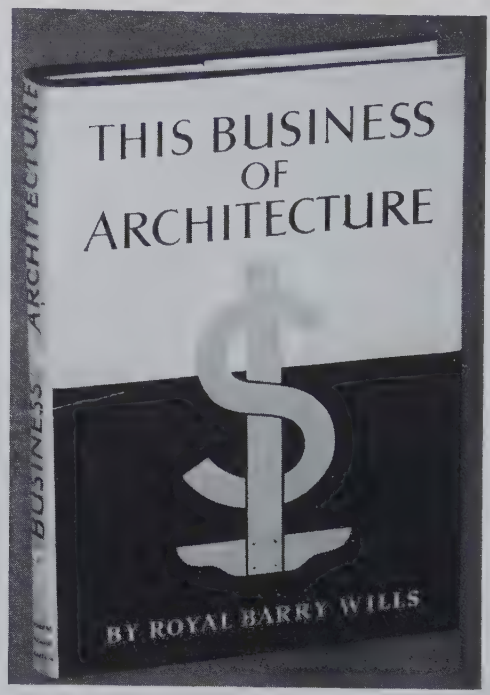

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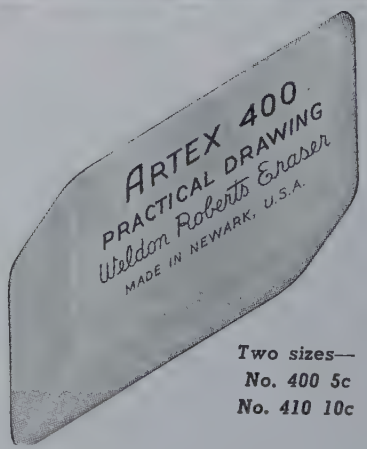

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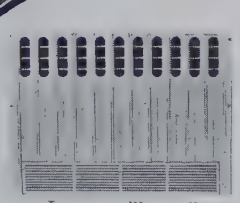

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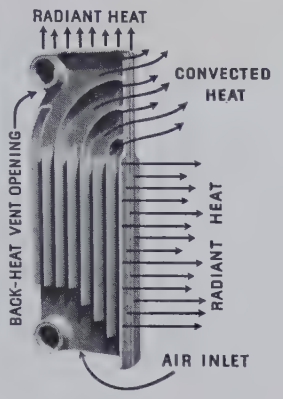

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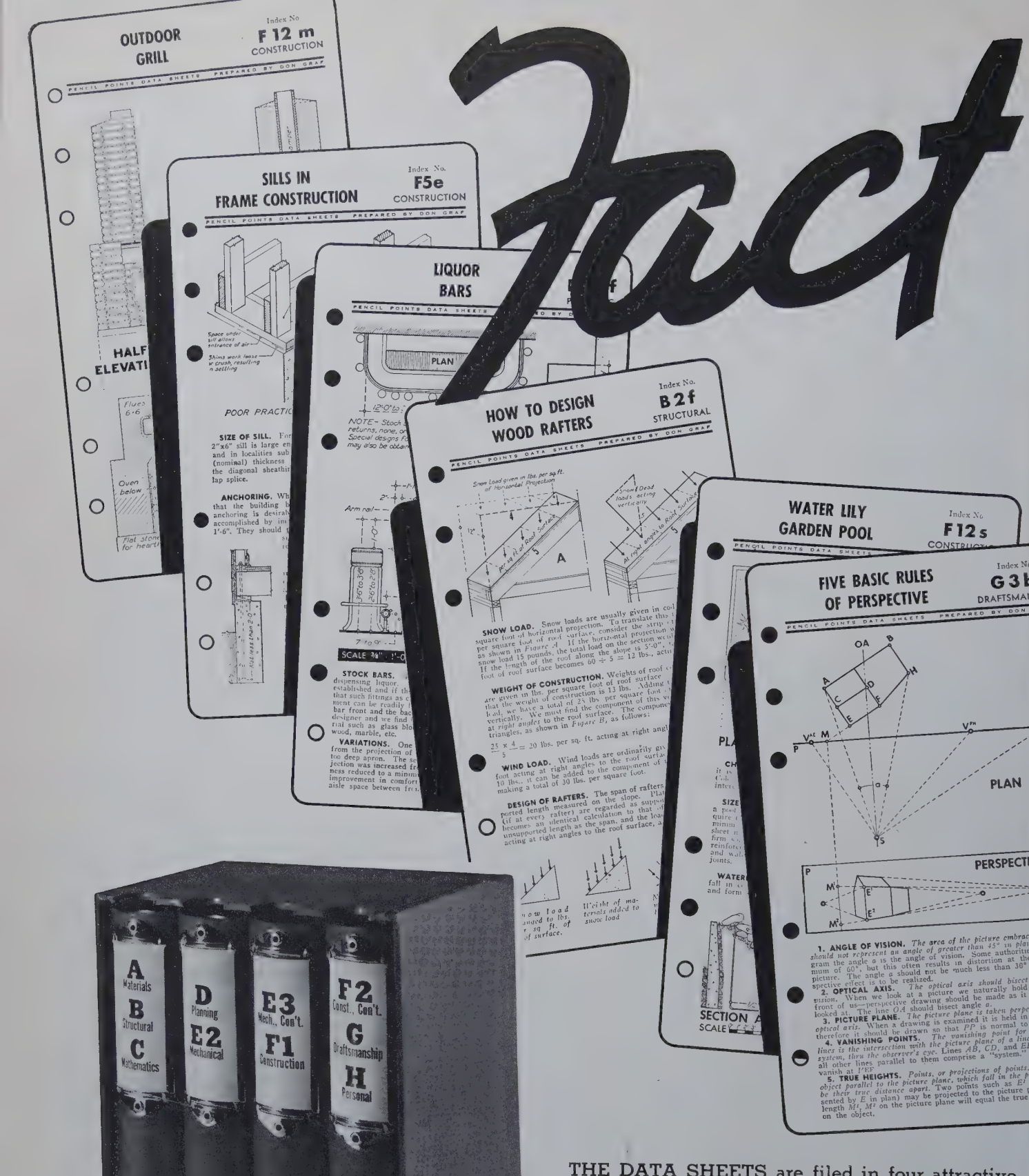

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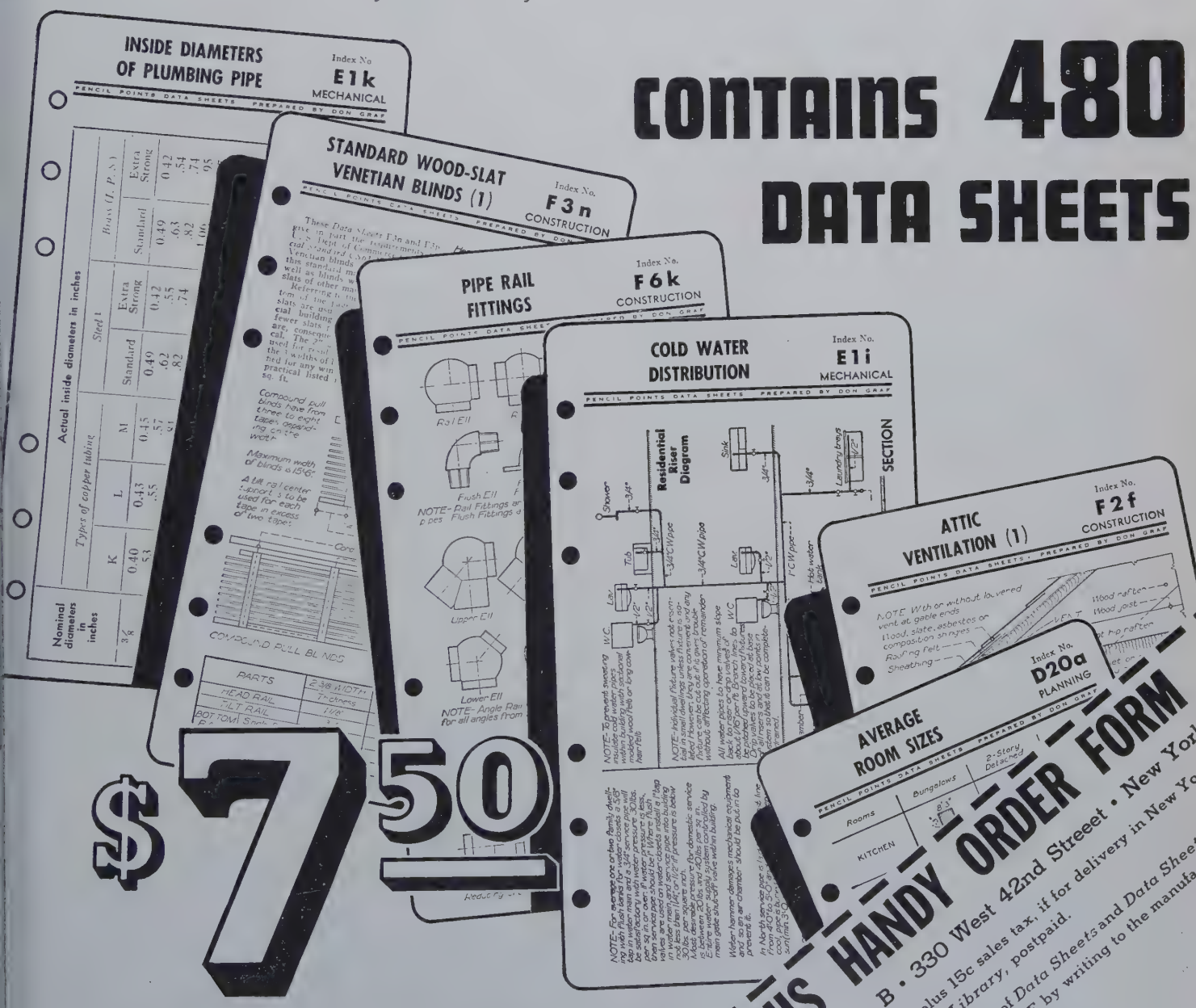

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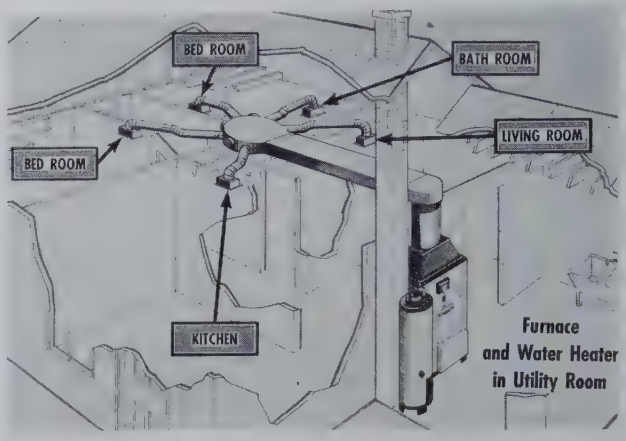

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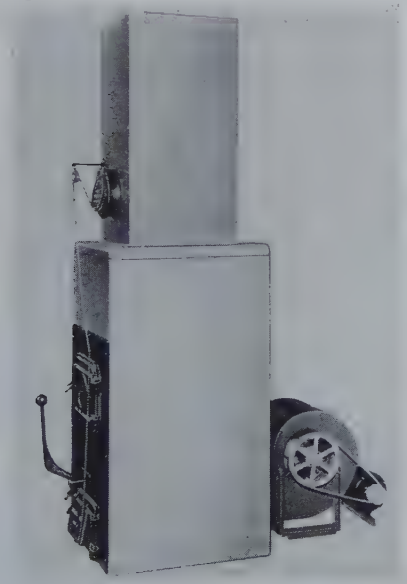

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(Continued on page 80)

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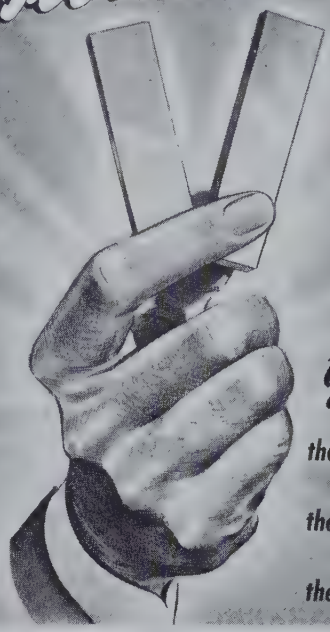

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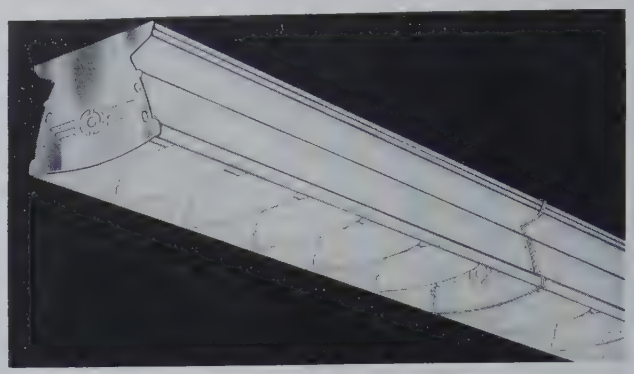
(Continued from page 79)

EXPOSED TROFFER FLUORESCENT FIXTURE

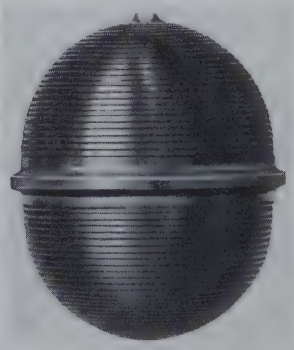
This new Day-Brite louver-type, exposed troffer for direct ceiling mounting has been designed



for single unit installations as well as for long continuous runs. The troffer is available for one and two 48-inch, 40-watt lamps parallel, and for one 60-inch, 100-watt lamp. The louvers are removable. Fixture-body and louvers are finished in baked Super-White enamel. Lamps are easily removed through the side opening without disturbing louvers, and the units are designed for easy installation and servicing. From Day-Brite Lighting, Inc., 5411 Bulwer Ave., St. Louis, Mo.

PLASTIC CLOSET TANK FLOAT

Priorities do not affect the production of a new Tenite closet tank float now being made by American Molded Products Corp., 1753 N. Honore St., Chicago, Ill. The float is said not to dent, crack, or break under usual handling or packing with tools, or in installation, repair, closet-cleaning. It is impervious to water and leak-proof. The two perfectly-fitted sections are Tenite-welded. The float is oval in shape, the standard 4 x 4 x 5 inches for use with equipment in the largest range of tanks. The float is non-corrosive, has a permanent glossy black finish, weighs 3.9 ounces.



EMERGENCY LIGHT AND POWER UNIT

Meeting the increased need created by national defense activities for emergency light and power protection, the Electric Storage Battery Co., 19th St. and Allegheny Ave., Philadelphia, Pa., has announced four new Exide emergency light and power units for industrial use. Each unit is used with an Exide battery of either the chloride or the flat plate type, has an automatic transfer switch which instantly transfers the battery to the emergency lighting circuit upon failure of the normal A.C. supply. When the A.C. service is restored the emergency lighting circuits are instantly transferred back to the A.C. supply.

The battery is kept fully charged at all times, because after normal power is restored the battery is

automatically placed on high rate charge. As soon as recharging is complete, the high rate is cut off and a rectifier then supplies a low rate of charge, enough to maintain the battery in a fully-charged condition. The new units may be had in capacities from 3,400 to 10,000 watts. Other systems are available in capacities ranging from 240 to 100,000 watts.

NEW DAMPER CONTROL

Feature of this improvement in fireplace damper construction is an ingeniously-designed poker control mechanism which makes for easier operation. The operating lever has a circular opening which enables it to move freely over a horizontal bar designed with two stops. The operating arm requires little effort to work. To facilitate installation and to assure an effective smoke-shelf, the damper also incorporates an extra-wide back ledge and built-on lintel.

The body of the unit is of cast semi-steel; the damper valve of heavy gage steel plate.

The new model, known as the Standard, is built in all popular sizes. More detailed information may be had from The Majestic Co., Huntington, Indiana.

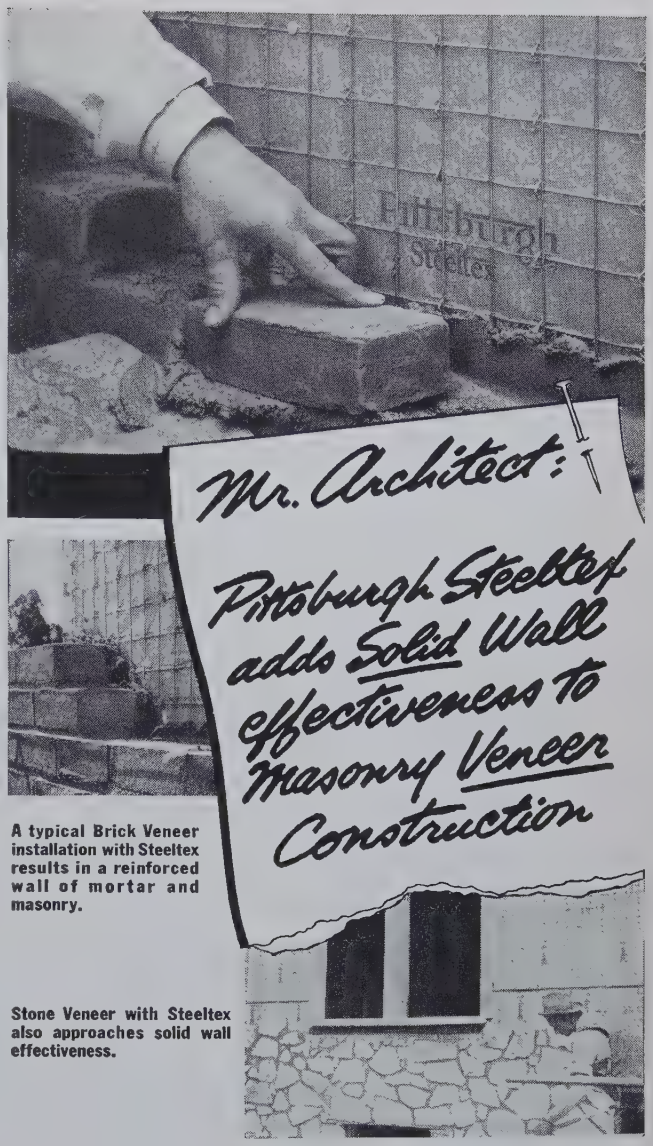
ODOR ABSORBING EQUIPMENT

A new Type A odor absorber, especially designed for homes, doctors' offices, small shops, reception and dressing rooms, etc., which will rid 100 cubic feet of air per minute of odors and gases, has been announced by the Dorex Division, W. B. Connor Engineering Corp., 114 E. 32nd St., New York. The new unit comes in an enameled metal case, can be used as a portable or stationary model, has a 40-watt motor, circulating fan, a dust filter, and four carbon-filled canisters. The carbon, when saturated, can be reactivated and used over and over again.

GARBAGE INCINERATOR

A popular-priced domestic garbage incinerator and rubbish burner, fired by gas, has been announced by Kohn Mfg. Co., Milwaukee, Wis. It has a capacity of 1½ bushels, adequate for the needs of the average home. The incinerator embodies new features of safety, economical operation, convenience. Overall diameter is 19 inches; height is 33½ inches. Castings are of heat-resisting grey iron. (The incinerator, under test, has reduced 150 pounds of sliced raw potatoes to 3½ pounds of ash. This ash is usable as a garden fertilizer). An automatic shut-off for the unit is available at a slight additional cost.

The incinerator is sold through the Equipment Service Co., 154 E. Erie St., Chicago, Ill., from which firm further details may be had on the new incinerator and other models in the Kohn line.



A typical Brick Veneer installation with Steeltex results in a reinforced wall of mortar and masonry.

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Steeltex for Masonry Veneer is not just a substitute for wood or composition sheathing. It is an "engineered" product that applies modern, scientific building principles to veneer practices.

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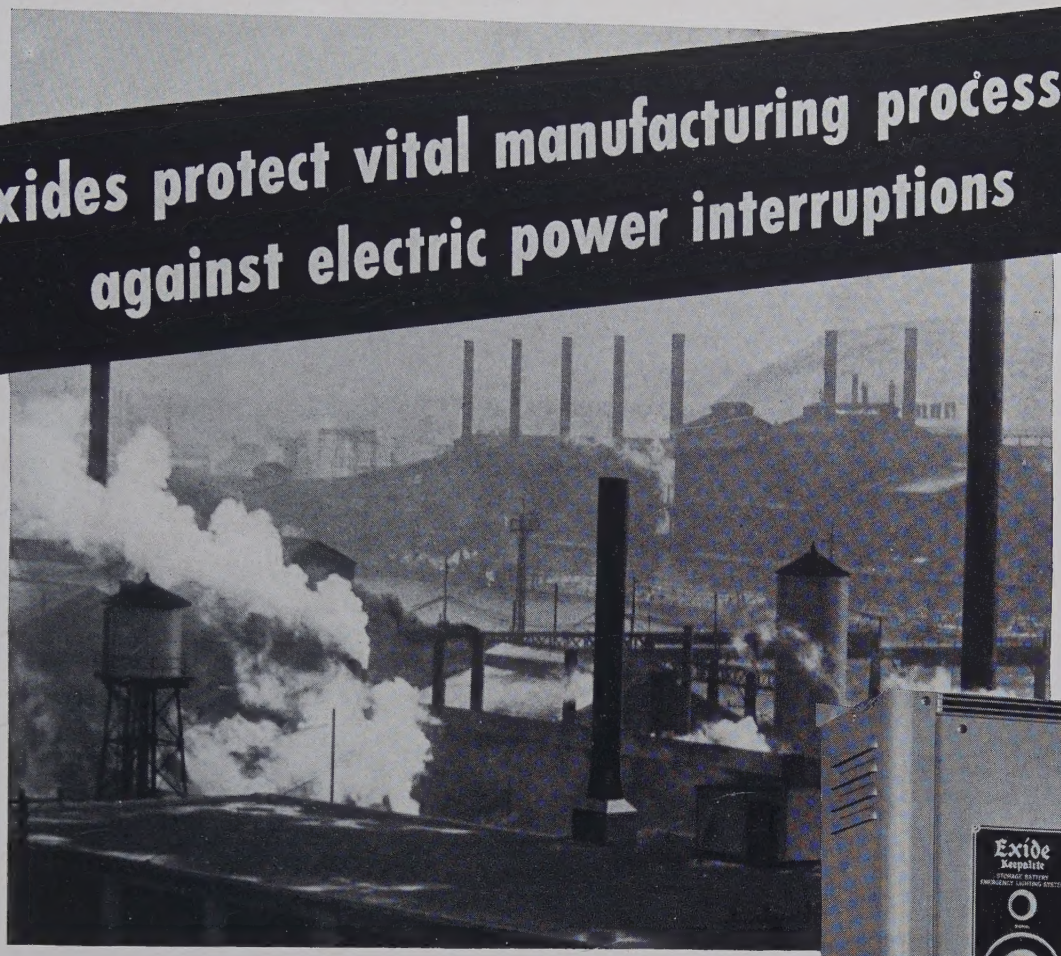

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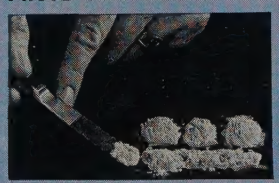

Make small pyramidal piles of the 3 other "white" cements side by side. Parallel them with a ridge of Trinity White.

Flatten them with a spatula or letter opener so that each pile is approximately 3/8" thick and the edges of all four piles nearly meet.

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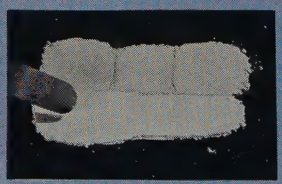

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